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Volume VIII
Part 7

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INTEGRATED INFORMATION SUPPORT SYSTEM (IISS)
Volume VIII - User Interface Subsystem
Part 7 - Forms Processor Unit Test Plan

S. Barker

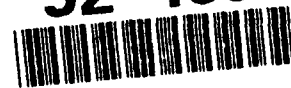
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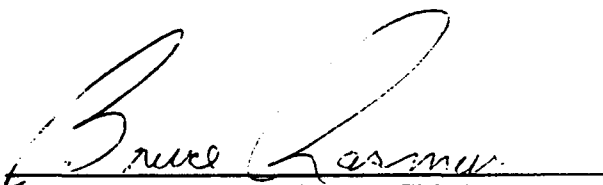
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19. ABSTRACT (Continue on reverse if necessary and identify block number) This unit test plan establishes the methodology and procedures used to test the capabilities of the Form Processor (FP). Block 11 - INTEGRATED INFORMATION SUPPORT SYSTEM (IISS) Vol VIII - User Interface Subsystem Part 7 - Forms Processor Unit Test Plan					
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FOREWORD

This technical report covers work performed under Air Force Contract F33600-87-C-0464, DAPro Project. This contract is sponsored by the Manufacturing Technology Directorate, Air Force Systems Command, Wright-Patterson Air Force Base, Ohio. It was administered under the technical direction of Mr. Bruce A. Rasmussen, Branch Chief, Integration Technology Division, Manufacturing Technology Directorate, through Mr. David L. Judson, Project Manager. The Prime Contractor was Integration Technology Services, Software Programs Division, of the Control Data Corporation, Dayton, Ohio, under the direction of Mr. W. A. Osborne. The DAPro Project Manager for Control Data Corporation was Mr. Jimmy P. Maxwell.

The DAPro project was created to continue the development, test, and demonstration of the Integrated Information Support System (IISS). The IISS technology work comprises enhancements to IISS software and the establishment and operation of IISS test bed hardware and communications for developers and users.

The following list names the Control Data Corporation subcontractors and their contributing activities:

<u>SUBCONTRACTOR</u>	<u>ROLE</u>
Control Data Corporation	Responsible for the overall Common Data Model design development and implementation, IISS integration and test, and technology transfer of IISS.
D. Appleton Company	Responsible for providing software information services for the Common Data Model and IDEF1X integration methodology.
ONTEK	Responsible for defining and testing a representative integrated system base in Artificial Intelligence techniques to establish fitness for use.
Simpact Corporation	Responsible for Communication development.
Structural Dynamics Research Corporation	Responsible for User Interfaces, Virtual Terminal Interface, and Network Transaction Manager design, development, implementation, and support.
Arizona State University	Responsible for test bed operations and support.

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SECTION 1

GENERAL

1.1 Purpose

This unit test plan establishes the methodology and procedures used to adequately test the capabilities of the computer program identified as the Form Processor, known in this document as the FP. The FP is one configuration item of the Integrated Information Support System (IISS) User Interface (UI). It consists of Form Processor callable routines and the User Interface Monitor which is the main controller of the Form Processor.

1.2 Project References

- [1] Systran ICAM Documentation Standards, 15 September 1983, IDS150120000C.
- [2] Structural Dynamics Research Corporation, Form Processor User Manual, UM 620344200, 31 May 1988.
- [3] Structural Dynamics Research Corporation, Form Processor Development Specification, DS 620344200, 31 May 1988.
- [4] Structural Dynamics Research Corporation, Forms Language Compiler Unit Test Plan, UTP620344401, 31 May 1988.
- [5] Structural Dynamics Research Corporation, Forms Driven Form Editor Unit Test Plan, UTP620344402, 31 May 1988.
- [6] Structural Dynamics Research Corporation, Report Writer Unit Test Plan, UTP620344501, 31 May 1988.
- [7] Structural Dynamics Research Corporation, Rapid Application Generator Unit Test Plan, UTP620344502, 31 May 1988.
- [8] Structural Dynamics Research Corporation, Text Editor Unit Test Plan, UTP620344600, 31 May 1988.
- [9] Structural Dynamics Research Corporation, Application Interface Unit Test Plan, UTP620344700, 31 May 1988.
- [10] Structural Dynamics Research Corporation, User Interface Services Unit Test Plan, UTP620344100, 31 May 1988.
- [11] Structural Dynamics Research Corporation, Form Processor Unit Test Plan, UTP620344200, 31 May 1988.

1.3 Terms and Abbreviations

American Standard Code for Information Interchange: (ASCII), the character set defined by ANSI X3.4 and used by most computer vendors.

Application Interface: (AI), subset of the IISS User Interface that consists of the callable routines that are linked with applications that use the Form Processor or Virtual Terminal. The AI enables applications to be hosted on computers other than the host of the User Interface.

Application Process: (AP), a cohesive unit of software that can be initiated as a unit to perform some function or functions.

Attribute: field characteristic such as blinking, highlighted, black, etc. and various other combinations. Background attributes are defined for forms or windows only. Foreground attributes are defined for items. Attributes may be permanent, i.e., they remain the same unless changed by the application program, or they may be temporary, i.e., they remain in effect until the window is redisplayed.

Common Data Model: (CDM), IISS subsystem that describes common data application process formats, form definitions, etc. of the IISS and includes conceptual schema, external schemas, internal schemas, and schema transformation operators.

Computer Program Configuration Item: (CPCI), an aggregation of computer programs or any of their discrete portions, which satisfies an end-use function.

Conceptual Schema: (CS), the standard definition used for all data in the CDM. It is based on IDEF1 information modelling.

Current Cursor Position: the position of the cursor before an edit command or function is issued in the text editor.

Cursor Position: the position of the cursor after any command is issued.

Device Drivers: (DD), software modules written to handle I/O for a specific kind of terminal. The modules map terminal specific commands and data to a neutral format. Device Drivers are part of the UI Virtual Terminal.

Display List: a list of all the open forms that are currently being processed by the FP or the user.

Display Size: the number of lines used in the edit area.

Extended Binary Coded Decimal Interchange Code: (EBCDIC), the character set used by a few computer vendors (notably IBM) instead of ASCII.

External Schema: (ES), an application's view of the CDM's conceptual schema.

Field: two dimensional space on a terminal screen.

Field Pointer: indicates the ITEM which contains the current cursor position.

Form: structured view which may be imposed on windows or other forms. A form is composed of fields. These fields may be defined as forms, items, and windows.

Form Definition: (FD), forms definition language after compilation. It is read at runtime by the Form Processor.

Forms Definition Language: (FDL), the language in which electronic forms are defined.

Forms Driven Form Editor: (FDFE), subset of the FE which consists of a forms driven application used to create Form Definition files interactively.

Form Editor: (FE), subset of the IISS User Interface that is used to create definitions of forms. The FE consists of the Forms Driven Form Editor and the Forms Language Compiler.

Form Hierarchy: a graphic representation of the way in which forms, items and windows are related to their parent form.

Forms Language Compiler: (FLAN), subset of the FE that consists of a batch process that accepts a series of forms definition language statements and produces form definition files as output.

Form Processor: (FP), subset of the IISS User Interface that consists of a set of callable execution time routines available to an application program for form processing.

Form Processor Text Editor: (FPTE), subset of the Form Processor that consists of software modules that provide text editing capabilities to all users of applications that use the Form Processor.

Integrated Information Support System: (IISS), a computing environment used to investigate, demonstrate, test the concepts and produce application for information management and information integration in the context of Aerospace Manufacturing. The IISS addresses the problems of integration of data resident on heterogeneous data bases supported by heterogeneous computers interconnected via a Local Area Network.

Item: non-decomposable area of a form in which hard-coded descriptive text may be placed and the only defined areas where user data may be input/output.

Logical Device: a conceptual device that identifies a top level window of an application. It is used to distinguish between multiple applications running simultaneously on a physical device. NOTE: a single application can have more than one logical device. To the end user this also appears as multiple applications running simultaneously.

Message: descriptive text which may be returned in the standard message line on the terminal screen. They are used to warn of errors or provide other user information.

Message Line: a line on the terminal screen that is used to display messages.

Network Transaction Manager: (NTM), IISS subsystem that performs the coordination, communication and housekeeping functions required to integrate the Application Processes and System Services resident on the various hosts into a cohesive system.

Open List: a list of all the forms that are currently open for an application process.

Operating System: (OS), software supplied with a computer which allows it to supervise its own operations and manage access to hardware facilities such as memory and peripherals.

Page: instance of forms in windows that are created whenever a form is added to a window.

Paging and Scrolling: a method which allows a form to contain more data than can be displayed with provisions for viewing any portion of the data buffer.

Physical Device: a hardware terminal.

Presentation Schema: (PS), may be equivalent to a form. It is the view presented to the user of the application.

Previous Cursor Position: the position of the cursor when the previous edit command was issued.

Qualified Name: the name of a form, item or window preceded by the hierarchy path so that it is uniquely identified.

Report Definition Language: an extension of the Forms Definition Language that includes retrieval and calculation of database information and is used to define reports.

Subform: a form that is used within another form.

User Data: data which is either input by the user or output by the application programs to items.

User Interface: (UI), IISS subsystem that controls the user's terminal and interfaces with the rest of the system. The UI consists of two major subsystems: the User Interface

Development System (UIDS) and the User Interface Management System (UIMS).

User Interface Development System: (UIDS), collection of IISS User Interface subsystems that are used by applications programmers as they develop IISS applications. The UIDS includes the Form Editor and the Application Generator.

User Interface Management System: (UIMS), the runtime UI. It consists of the Form Processor, Virtual Terminal, Application Interface, the User Interface Services and the Text Editor.

User Interface Monitor: (UIM), part of the Form Processor that handles messaging between the NTM and the UI. It also provides authorization checks and initiates applications.

User Interface/Virtual Terminal Interface: (UI/VTI), another name for the User Interface.

Virtual Terminal: (VT), subset of the IISS User Interface that performs the interfacing between different terminals and the UI. This is done by defining a specific set of terminal features and protocols which must be supported by the UI software which constitutes the virtual terminal definition. Specific terminals are then mapped against the virtual terminal software by specific software modules written for each type of real terminal supported.

Virtual Terminal Interface: (VTI), the callable interface to the VT.

Window: dynamic area of a terminal screen on which predefined forms may be placed at run time.

Window Manager: a facility which allows the following to be manipulated: size and location of windows, the device on which an application is running, the position of a form within a window. It is part of the Form Processor.

SECTION 2

DEVELOPMENT ACTIVITY

2.1 Statement of Pretest Activity

During system development, the computer programs were tested progressively. Functionality was incrementally tested, and as bugs were discovered by this testing, the software was corrected.

Each Form Processor callable routine was tested individually through Form Processor development. A test program, ARTEST, was developed as an easy means of testing changes to the Form Processor. This test program allows a developer to type in commands that are translated into the appropriate Form Processor calls. With this test program all Form Processor callable routines may be executed.

Testing of the User Interface Monitor (UIM) of the Form Processor began with the integration of the Form Processor and the NTM. The UIM's main task is to receive messages sent to the Form Processor. A test minintm was developed also so that the Window Management processing capability of the Form Processor could be tested before integration with the NTM.

All pretesting activity was conducted by the individual program developer in a manual mode. The developer would manually enter data onto the screen and observe the results. Any errors were noted by the developer, and corrections to the Form Processor software were then made after a testing session.

2.2 Pretest Activity Results

The pretest activity was very successful in the elimination of programming bugs so that at release time only a few bugs were found in the Form Processor. The development of the test program, ARTEST, has proved very beneficial since as new functionality was added to the Form Processor, ARTEST was also updated to test this functionality. ARTEST is the major test tool for the Unit Test Plan of the Form Processor.

The minintm was useful in testing the window management processing; however, it postponed our integration with the real NTM since it was easier to run and test standalone. This integration was a difficult process. The only significant bug found in the window management processing through the NTM integration was incorrect use of the Source as the application name in an Application End message.

The pretesting activity was successful in eliminating programming errors and helped pinpoint difficulties in integration with the NTM.

SECTION 3

SYSTEM DESCRIPTION

3.1 System Description

The Form Processor consists of a set of callable execution time routines that allows an application program to send/receive formatted screens to/from various terminals and to perform terminal control functions independent of the terminal type. It also has a User Interface Monitor (UIM) that handles translating messages sent across the NTM into the appropriate FP calls. The UIM also handles the log on to IISS, processing the IISS Function Screen and processing the application status form.

3.2 Testing Schedule

The execution of the Form Processor is dependent upon the NTM subsystem of IISS when it is not configured standalone. Testing of the Form Processor must be done only after the NTM has been successfully tested. In this unit test, the Form Processor is dependent on the Application Interface (AI) and on the Virtual Terminal (VT).

3.3 First Location Testing

These tests of the Form Processor require the following:

Equipment: Air Force VAX, terminals supported by the Virtual Terminal as listed in the UI Terminal Operator Guide.

Support Software: Release 2.0 of the Integrated Information Support System, the Relational Software Incorporated Oracle database management system.

Personnel: One integrator familiar with the IISS.

Training: The FP User Manual has been previously provided with the current release.

Deliverables: The current release of the User Interface Management Subsystem.

Test Materials: This test may be run interactively by inputting the appropriate data and observing the output as outlined in this test plan. A script file has also been created and run generating a save file to be used for comparison in subsequent tests of this subsystem.

Security considerations: None.

3.4 Subsequent Location Testing

The requirements as listed above need to be met; however, in subsequent testing it is advantageous to create a script file of the outlined tests and run this saving the output of the test for future comparisons.

SECTION 4

SPECIFICATIONS AND EVALUATIONS

4.1 Test Specifications

The test uses the program ARTEST to test the following areas of functionality as specified in section 3.2 of the Form Processor Development Specification:

- o Form processing
- o User Profile Maintenance
- o Virtual Terminal Pass-through
- o NTM message processing
- o Function key processing

The following sections list the FP routines that handle the particular area of functionality, where appropriate. The associated figures refer to the specific activities performed in section 5.3 to test each area.

4.1.1 Form Processing

Controlling the Form Processor:

INITFP - Figures 2a,b
TERMFP - Figures 58a,b
SETDQN - Figures 32a, 32d-f
GETDQN - Figures 32b,c

Opening and Closing Forms:

OPNFRM - Figures 8a-d
CLSFRM - Figures 15a-c

Creating and Saving Forms:

CRTFRM - Figures 104a, 104c
SAVFRM - Figures 151a-c
REPFRM - Figures 103a,b
MAKFRM - Figures 105a,b

Adding and Removing Fields:

CRTFLD - Figures 99a,b
ADDFLD - Figures 97a-98b, 99c, 104b,c
REPFLD - Figures 100a,c
MVRFLD - Figures 101a,b
RMVFLD - Figures 102
GFMFLD - Figures 109a-e
GDPFEX - Figures 107a-c
GDPFLC - Figures 108

Changing Characteristics:

ADDDIM - Figures 110a,b	INQATT - Figures 130a-c
INQSIZ - Figures 139a-c	INQDIM - Figures 138a,b
INQDOM - Figures 132	INQVAL - Figures 141
INQLOC - Figures 134a,b	INQABS - Figures 129a-c
INQTYP - Figures 140a-c	INQPRO - Figures 136a-c
INQAPR - Figures 155,158,159	INQHLP - Figures 133a-c
RMVATT - Figures 142a-d	RMVDIM - Figures 112a,b
RMVDOM - Figures 145a,b	144a,b
RMVHLP - Figures 147a,b	RMVARY - Figures 148a,b
RMVVAL - Figures 150a-d	RMVPRO - Figures 137a,b
SETAPR - Figures 156,157	RMVAPR - Figures 160-163
SETDIM - Figures 120a,b	SETDOM - Figures 111a-e,
SETDIS - Figures 99c,d	113a-d
SETLOC - Figures 100b,c,	SETNAM - Figures 110a,b
118a-d	SETTYP - Figures 121a-c,
SETVAL - Figures 126a-128b	123a,b
SETSIZ - Figures 122a-d,	125a-d
124a-d	SETATT - Figures 115a,b
SETHLP - Figures 117a-f	SETPRO - Figures 114a-f,
	135c-e

Modifying the Display List:

ADDELM - Figures 7a-v
ADDFRM - Figures 8a-d
APRFLD - Figures 153a-d
GETATT - Figures 22a,b
GETBAK - Figures 6a,b
GPAGE - Figures 11a,b
GWINDOW - Figures 12a,b
PUTATT - Figures 23a,24b,27a-c
PUTBAK - Figures 25a,b,28a,b
RMVPAG - Figures 10a,b
RPLFRM - Figures 9a,b

Transferring Data:

PDATA - Figures 16a,b, 18a,b
GDATA - Figures 17a,b, 19a,b

Displaying Forms:

OUTSCR - Figures 31a-c
OISCR - Figures 31a-c

Getting and Setting the Cursor Position:

GETCUR - Figures 29a,b
PARFQN - Figures 30a,b
PUTCUR - Figures 29a-c

Displaying Messages:

PMSGLC - Figures 34k
PMSGLS - Figures 34n

Creating and Modifying Logical Devices:

- CHGLDV - Figures 40a,b
- CLSLDV - Figures 54a,b
- GETLDV - Figures 36a,b
- INQLDV - Figures 35a,b
- MOVLDV - Figures 52a-c
- OPNLDV - Figures 39a,b
- SETLDV - Figures 37a,b 38a,b

4.1.2 User Profile Maintenance

GTUINF - Figures 3a,b

4.1.3 Virtual Terminal Pass-through

- GETVTI - Figures 4a,b
- INITVT - Figures 4a-6b
- PUTVTI - Figures 6a,b
- TERMVT - Figures 4a-6b

4.1.4 NTM Message Processing

All Figures

4.1.5 Function Key Processing

Control Keys: All Figures

Application Mode Keys: Figures 29b,c

Scroll/Page Mode Keys: Figures 34a-o

Text Editor Mode Keys: Figures 60a-94

Window Manager Mode Keys: Figures 41a-53d

Status Mode Keys: 50b,c, 51a,b, 52c, 53a, 56d,e, 57a,b,
58a

4.2 Testing Methods and Constraints

The tests as outlined in Section 5 must be followed. The required input is stated for each test. This testing uses the normal mode of operation of these functions and does not completely exercise all the error combinations that a user of the Form Processor might create by faulty entry of form field information. Much of this testing has been done, however, through the normal testing done by the developer of these functions. No data recording is required. It is suggested that on further running of this test, scripting of the test may be done and the output from running the script be saved for future testing. No additional constraints are placed on this unit test besides those listed in Section 3.3 of this unit test plan.

4.3 Test Progression

The progression of testing of the Form Processor is fully outlined in Section 5 of this unit test plan. This progression should be followed exactly to insure the successful testing of this IISS configuration item.

4.4 Test Evaluation

The test results are evaluated by comparing the information returned on the various output screens to that specified as successful for the given test. As outlined in Section 5, each test of Form Processor functionality provides an input screen with the required data entry specified and the resulting output for a successful test. To speed up this testing and provide more accurate measurement of the test's success, scripting has been used. The resulting output of this test is saved in the files FPUTP.SAV, FPTEUTP.SAV, and FPDFUTP.SAV. The corresponding test script files are FPUTP.SCP, FPTEUTP.SCP, and FPDFUTP.SCP. All of these files are under IISS Configuration Management. If scripting is used, these files should be copied over to the test directory. The .SAV file may be used for future comparison against the corresponding ...TST.SAV files generated when running this unit test using scripting. To compare the results use the command file DIFFFILE.COM which is under configuration management. The only differences should be the date/time stamps on the IISS Function Screen and the type of device on the window manager screen. The device type is given to the UIS by the NTM at run time.

SECTION 5

TEST PROCEDURES

5.1 Test Description

The program ARTEST is used to perform this test. Commands are entered on the ARTEST form Command Line field. The commands are then translated by the program into a call to the appropriate Form Processor routine, and the resulting output is observed on the ARTEST form.

The following keys are used to move within forms (using the VT100 terminal as an example): the <ENTER> key is used to activate all commands; the <TAB> key is used to move from field to field within the form; and the arrow keys are used to move within fields. In addition, ESC TAB is a reverse TAB. The keypad layouts for the various modes are shown in Appendix B.

5.2 Test Control

As outlined, this unit test may be done manually or run automatically using the supplied script files. To manually perform this unit test the tester must be logged into the IISS system and enter ARTEST on the IISS Function Screen. In section 5.3 the required input data is specified for each function being tested and the resulting successful output is also specified. The order of the testing is also completely specified. The test control information is completely described by the sequence of the input and output screens presented in this section. The success of the test may be determined by doing a comparison on the .SAV files produced against the ones provided under IISS Configuration Management.

5.3 Test Procedures

To run the unit test plan as outlined in this section on a VAX, one must be logged on to an IISS account. The NTM must be up and running and the UI group logical names IISSFLIB and IISSMLIB must be set properly. IISSFLIB points to the directory containing production form definitions (FD files). IISSMLIB points to the directory containing error messages (MSG files).

This unit test uses the program ARTEST and its associated forms ff1 through ff39. The FDL source file for these forms is presented in Appendix A. The executable for ARTEST should exist in the NTM environment directory and the NTM dirtbl.dat should have its SD entry pointing to this directory. The NTM tables APITBL and APTTBL should have ARTEST set up as a normal IISS application program. This test also uses the files PRINT.DEV and FPOTP.DAT. They must be created in the NTM environment directory before beginning the test.

Assuming the NTM is up and running, an IISS user may start this unit test plan as follows:

```
$ SET DEF <to directory containing your NTM environment>  
$ VT100 -RFPUTP.SCP -SFPTST.SAV
```

This starts up the VT100 device driver with the first of three source scripts as input and specifies a save file for output. If the User Interface system has been installed at your site with a different device driver, then this step is amended as appropriate. The test begins executing on the terminal. When the \$ returns, run the second script by entering:

```
$ VT100 -RFPTEUTP.SCP -SFPTETST.SAV
```

When the \$ returns again, run the thris script by entering:

```
$ VT100 -RFPDFUTP.SCP -SFPDFTST.SAV
```

The results of the test are saved in the .SAV files. These files should be compared with the appropriate .SAV files under Configuration Management as described in Section 4.4. The following figures show not only the form input and output but also the sequencing of the test.

User ID:

Passverd:

Role:

MSG: 0

application

Figure 5-1a Logon Screen

A screenshot of a computer screen showing a user information entry form. The form is enclosed in a rectangular border. At the top center, the text "User ID:" is followed by a small rectangular input field containing the text "berenc". In the bottom left corner, the text "MSG:" is followed by a small rectangular input field containing the number "0". In the bottom right corner, the word "application" is displayed.

Figure 5-1b Enter User Information

IISS TEST BED VERSION 2.3

Date: 11/30/87 Time: 12:56:10 User ID: MORENC Role:

Function: Device Type: Device Name:

MSC: application

Figure 5-1c IISS Function Screen

IISB TEST BED VERSION 2.3			
Date: 11/30/87	Time: 12:56:10	User ID: NOBENC	Role: <input type="text" value="MANAGER"/>
Function: <input type="text" value="ARTEST"/>	Device Type: <input type="text"/>	Device Name: <input type="text"/>	
MSG: <input type="text" value="0"/>		application	

Figure 5-2a Start ARTEST Application

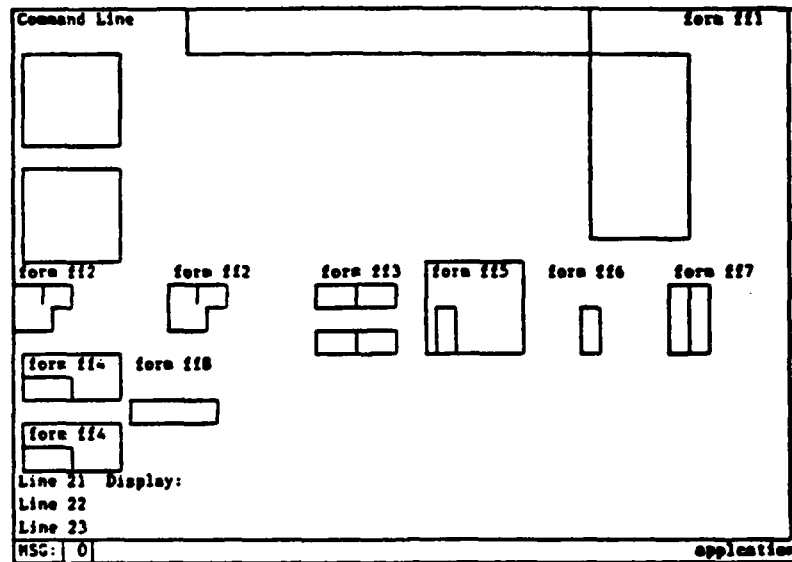


Figure 5-2b First ARTEST Screen

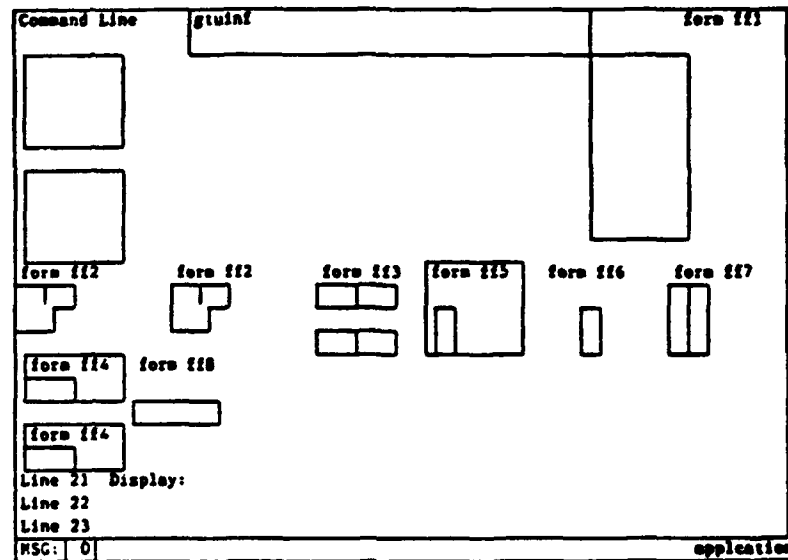


Figure 5-3a Test GTUINF

Command Line		gtuinf		form ff1	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form ff2	form ff2	form ff3	form ff5	form ff6	form ff7
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form ff4	form ff8				
<div></div>	<div></div>				
form ff4					
<div></div>					
Line 21 Display: User Name = NOREMC , User Role = MANAGER					
Line 22					
Line 23					
NSC: 0		application			

Figure 5-3b GTUINF Result

Command Line		getvti		form f11		
<div></div>		<div></div>		<div></div>		
<div></div>		<div></div>		<div></div>		
form f12		form f12	form f13	form f15	form f16	form f17
<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form f14		form f18				
<div></div>		<div></div>				
form f14						
<div></div>						
Line 21 Display: User Name = NOLEMC , User Role = MANAGER						
Line 22						
Line 23						
NSC: 0		application				

Figure 5-4a Test GETVTI

Command Line		getvti		form f11	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form f12	form f12	form f13	form f15	form f16	form f17
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form f14	form f18				
<div></div>	<div></div>				
form f14					
<div></div>					
Line 21 Display: User Name = MORENC , User Role = MANAGER					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-4b GETVTI Result

Command Line		getvti		form ff1	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form ff2		form ff2		form ff3	
<div></div>		<div>xx</div>		<div></div>	
form ff4		form ff8		form ff5	
<div></div>		<div></div>		<div></div>	
form ff4				form ff6	
<div></div>				<div></div>	
Line 21		Display: User Name = NORENC		, User Role = MANAGER	
Line 22		.....		.....
Line 23		.....		.....
MSG: 0				application	

Figure 5-5a Enter Data for GETVTI

Enter "xx" in form ff2 as shown and press <ENTER>.

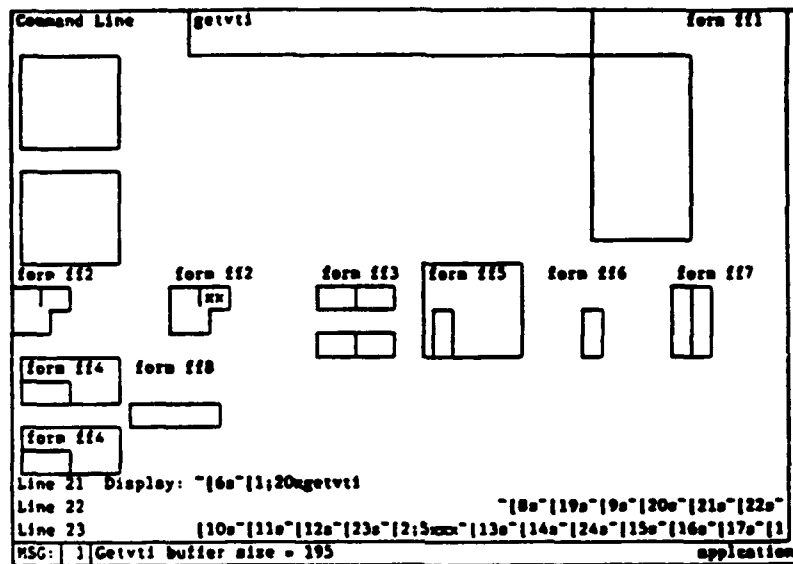


Figure 5-5b GETVTI Result

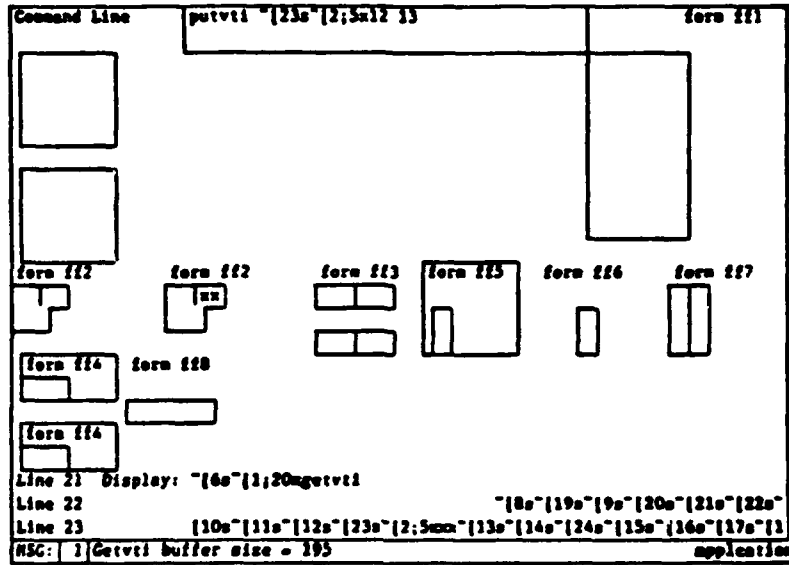


Figure 5-6a Test PUTVTI

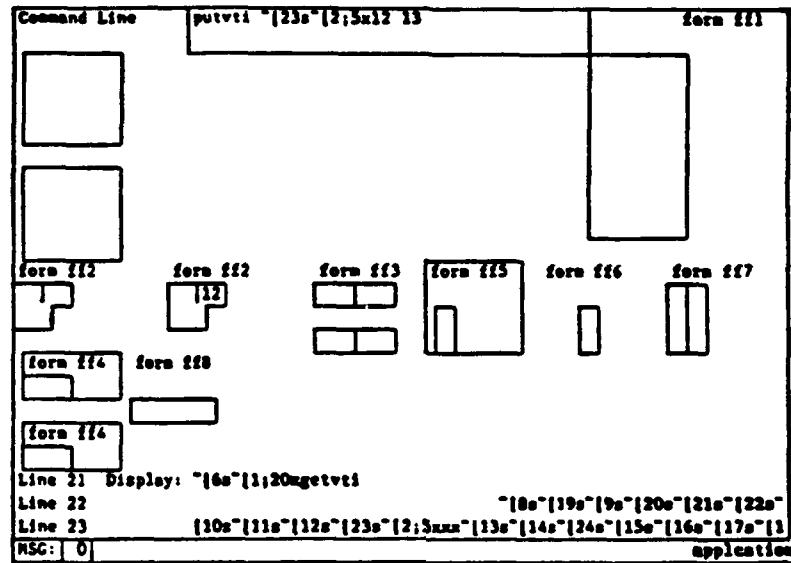


Figure 5-6b PUTVTI Result

Command Line		addira v3 ff10		form ff1		
<div></div>		<div></div>		<div></div>		
<div></div>		<div></div>		<div></div>		
form ff2		form ff2	form ff3	form ff5	form ff6	form ff7
<div></div>		<div>12</div>	<div></div>	<div></div>	<div></div>	<div></div>
form ff4		form ff8				
<div></div>		<div></div>				
form ff4						
<div></div>						
Line 21 Display:						
Line 22						
Line 23						
MSG: 0		application				

Figure 5-7a Add Fixed Size Form

Command Line		addira w3 f110		form	
				form f110	
form f11		form f12	form f13	form f15	form f16
form f14		form f18			
form f14					
Line 21 Display:					
Line 22					
Line 23					
NSG: 0		application			

Figure 5-7b After Adding Fixed Size Form

Command Line addeln ff10.11

form ff1

form ff2

form ff3

form ff5

form ff6

form ff7

form ff4

form ff8

Line 21 Display:
Line 22
Line 23

MSG: 0 application

Figure 5-7c Add First Element to Form ff10

Command Line addeln ff10.11

Form ff10

Form ff1

Form ff2

Form ff3

Form ff5

Form ff6

Form ff7

Form ff4

Form ff8

Form ff4

Line 21 Display: 1

Line 22

Line 23

NSC: 0 application

Figure 5-7d Form ff10 with One Element

Press <Enter>

Command Line addeln ff10.11

form ff1

form ff10

form ff2

form ff2

form ff3

form ff5

form ff6

form ff7

form ff4

form ff4

Line 21 Display: 2

Line 22

Line 23

MSG: 0 application

Figure 5-7e Form ff10 with Two Elements

Press <Enter>

Command Line		addeln ff10.11		form ff1	
				form ff10	
form ff2		form ff2	form ff3	form ff5	form ff6
form ff4		form ff8			
form ff4					
Line 21 Display: 3					
Line 22					
Line 23					
NSC: 0		application			

Figure 5-7f Form ff10 with Three Elements

Press <Enter>

Command Line addeln ff10.11

form ff1

form ff10

form ff2

form ff3

form ff5

form ff6

form ff7

form ff4

form ff8

form ff9

form ff10

Line 21 Display: 4

Line 22

Line 23

MSG: 0 application

Figure 5-7g Form ff10 with Four Elements

Press <Enter>

The image shows a graphical user interface with a command line at the top. The command line contains the text 'addelm ff10.11'. Below the command line, there are several overlapping windows. The windows are labeled 'form ff1' through 'form ff10'. 'form ff1' is the largest and is at the top right. 'form ff10' is a smaller window overlapping the bottom left of 'form ff1'. Other windows like 'form ff2', 'form ff3', 'form ff4', 'form ff5', 'form ff6', 'form ff7', 'form ff8', and 'form ff9' are also visible, some overlapping each other. At the bottom of the screen, there is a status bar with the text 'MSG: 1 Adding an element would exceed bounds of form application'.

Command Line addelm ff10.11 form ff1

form ff10

form ff2 form ff3 form ff5 form ff6 form ff7

form ff4 form ff8

form ff4

Line 21 Display:
Line 22
Line 23

MSG: 1 Adding an element would exceed bounds of form application

Figure 5-7h Error on Fixed Size Form

Command Line		rplfrn v3 0 f11		form f1	
<div style="border: 1px solid black; width: 50px; height: 40px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 50px; height: 40px;"></div>				<div style="border: 1px solid black; width: 50px; height: 40px; position: relative;"> <div style="position: absolute; top: 0; left: 0; right: 0; border-bottom: 1px solid black; height: 10px;"></div> <div style="position: absolute; top: 10px; left: 0; right: 0; border-bottom: 1px solid black; height: 10px;"></div> <div style="position: absolute; top: 20px; left: 0; right: 0; border-bottom: 1px solid black; height: 10px;"></div> <div style="position: absolute; top: 30px; left: 0; right: 0; border-bottom: 1px solid black; height: 10px;"></div> <div style="position: absolute; top: 40px; left: 0; right: 0; border-bottom: 1px solid black; height: 10px;"></div> </div>	
form f12	form f12	form f13	form f15	form f16	form f17
<div style="border: 1px solid black; width: 30px; height: 20px;"></div>	<div style="border: 1px solid black; width: 30px; height: 20px; position: relative;"> <div style="position: absolute; top: 0; left: 0; right: 0; border-bottom: 1px solid black; height: 10px;"></div> </div>	<div style="border: 1px solid black; width: 40px; height: 20px;"></div>	<div style="border: 1px solid black; width: 40px; height: 20px;"></div>	<div style="border: 1px solid black; width: 20px; height: 20px;"></div>	<div style="border: 1px solid black; width: 20px; height: 20px;"></div>
form f14	form f18				
<div style="border: 1px solid black; width: 30px; height: 20px;"></div>	<div style="border: 1px solid black; width: 40px; height: 20px;"></div>				
form f14					
<div style="border: 1px solid black; width: 30px; height: 20px;"></div>					
Line 21 Display:					
Line 22					
Line 23					
MSG: 1 Adding an element would exceed bounds of form					application

Figure 5-7i Add Open-ended Form

Command Line		rplfrm v3 0 f111		form f11	
<div></div>				<div>form f111</div>	
<div></div>					
form f12	form f12	form f13	form f15	form f16	form f17
<div></div>	<div>12</div>	<div></div>	<div></div>	<div></div>	<div></div>
form f14	form f18				
<div></div>	<div></div>				
form f14					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
MSC: 0		application			

Figure 5-7j After Adding Open-ended Form

Command Line		addeln ff11.11		form ff1	
				Form ff11	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4				form ff6	
form ff4				form ff7	
Line 21 Display:					
Line 22					
Line 23					
WSC: 0		application			

Figure 5-7k Add First Element to Form ff11

Command Line addeln ff11.11

form ff1

form ff11

form ff2

form ff3

form ff5

form ff6

form ff7

form ff4

form ff4

Line 21 Display: 1

Line 22

Line 23

MSG: 0 application

Figure 5-71 Form ff11 with One Element

Press <Enter>

Command Line		addeln ffl1.11		form ffl1	
<div></div>		<div></div>		<div>Form ffl1</div>	
form ffl2		form ffl2		form ffl3	
<div></div>		<div></div>		<div></div>	
form ffl4		form ffl5		form ffl6	
<div></div>		<div></div>		<div></div>	
form ffl4		form ffl7		form ffl8	
<div></div>		<div></div>		<div></div>	
Line 21 Display: 2					
Line 22					
Line 23					
NSC: 0		application			

Figure 5-7m Form ffl1 with Two Elements

Press <Enter>

Command Line addeln f111.11 form f11

form f111

form f12 form f12 form f13 form f15 form f16 form f17

form f14 form f14

Line 21 Display: 3
Line 22
Line 23

MSG: 0 application

Figure 5-7n Form ff11 with Three Elements

Press <Enter>

Command Line		addeln ffl1.11		form ffl	
<div></div>		<div></div>		<div>Form ffl1</div>	
<div>form ffl2</div>		<div>form ffl2</div>		<div>form ffl3</div>	
<div>form ffl4</div>		<div>form ffl5</div>		<div>form ffl6</div>	
<div>form ffl4</div>		<div>form ffl7</div>		<div>form ffl8</div>	
Line 21 Display: 4		Line 22		Line 23	
NSC: 0				application	

Figure 5-7o Form ffl1 with Four Elements

Press <Enter>

Command Line		addelm ffl1.11		form ffl	
<div></div>		<div></div>		<div>Form ffl1</div> <div></div> <div></div> <div></div> <div></div> <div></div>	
form ff2		form ff2		form ff3	
<div></div>		<div></div>		<div></div>	
form ff4		form ff8		form ff5	
<div></div>		<div></div>		<div></div>	
form ff4				form ff6	
<div></div>				<div></div>	
Line 21 Display: 5				form ff7	
Line 22				<div></div>	
Line 23				<div></div>	
MSG: 0				application	

Figure 5-7p Form ffl1 with Five Elements

The screenshot shows a terminal window with a command line at the top containing the text 'addeln ffl1.11'. Below the command line, there are several forms labeled 'form ffl1' through 'form ffl7'. Form ffl1 is a vertical list with four numbered boxes (1, 2, 3, 4). Form ffl2 is a small box with the number 12. Form ffl3 is a box with two horizontal slots. Form ffl4 is a box with two horizontal slots. Form ffl5 is a box with a vertical slot. Form ffl6 is a box with a vertical slot. Form ffl7 is a box with two vertical slots. At the bottom of the terminal window, there is a status bar with the text 'Line 21 Display: 5', 'Line 22', 'Line 23', 'NSC: 0', and 'application'.

Figure 5-7q Add Data to Form ffl1

Add data as shown and press <Mode> key to get into Scrl1/Page mode

Command Line		addels f111.11		form f11	
				form f111	
				1	
				2	
				3	
				4	
form f12		form f12		form f13	
		12		form f15	
				form f16	
form f14		form f18		form f17	
form f14					
Line 21 Display: 5					
Line 22					
Line 23					
MSG: 0		scrll/page			

Figure 5-7r Scrll/Page Mode

Press PF5 (Scroll up)

Command Line		addeln ffl1.11		form ffl	
				form ffl1	
				2	
				3	
				4	
form ffl1		form ffl2		form ffl3	
form ffl4		form ffl5		form ffl6	
form ffl4		form ffl7			
form ffl4					
Line 21 Display: 5					
Line 22					
Line 23					
MSG: 0				scr11/page	

Figure 5-7s Form ffl1 Showing Fifth Element

[illegible]

Figure 5-7t Add Data in Sixth Element

Add '5' as shown in Form ff11

The screenshot shows a terminal window with a command line at the top that reads "rplfrm screen 0 ff1". Below the command line, there is a list of forms: "form ff1", "form ff2", "form ff3", "form ff4", "form ff5", "form ff6", and "form ff7". The "form ff1" is highlighted. At the bottom of the terminal window, there is a status bar that reads "Line 21 Display: 5", "Line 22", "Line 23", and "NSC: 0". The word "application" is visible in the bottom right corner of the terminal window.

Figure 5-7u Remove Form ff11

Press <Mode> Key to return to application mode then enter screen as shown.

Command Line		form f11			
<div></div>		<div></div>			
<div></div>		<div></div>			
form f12	form f12	form f13	form f15	form f16	form f17
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form f14	form f18				
<div></div>	<div></div>				
form f14					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-7v New Screen

Command Line		addr v3 f15		form f11	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form f12	form f12	form f13	form f15	form f16	form f17
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form f14	form f18				
<div></div>	<div></div>				
form f14					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
NSC: 0		application			

Figure 5-8a Test ADDFRM

Command Line		address w3 ff5		form ff1	
<div></div>		<div></div>		<div>form ff5</div>	
<div>form ff2</div>		<div>form ff2</div>		<div>form ff3</div>	
<div>form ff4</div>		<div>form ff4</div>		<div>form ff5</div>	
<div>form ff4</div>		<div>form ff6</div>		<div>form ff7</div>	
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-8b Form ff5 in W3

Command Line		addfrm v3 ff2		form ff1	
<div></div>		<div></div>		<div>form ff5</div>	
<div></div>		<div></div>		<div></div>	
form ff2		form ff2		form ff3	
<div></div>		<div></div>		<div></div>	
form ff4		form ff8		form ff5	
<div></div>		<div></div>		<div></div>	
form ff4				form ff6	
<div></div>				<div></div>	
form ff7					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
ASC: 0				application	

Figure 5-8c Add Another Form

Command Line addfrm v3 ff2 form ff1

form ff2

form ff2 form ff3 form ff5 form ff6 form ff7

form ff4 form ff8

form ff4

Line 21 Display:
Line 22
Line 23
MSG: 0 application

Figure 5-8d Form ff2 in W3

Command Line		rplfrm w3 2 f13		form f11		
				form f12		
form f12		form f12	form f13	form f15	form f16	form f17
form f14		form f18				
form f14						
Line 21 Display:						
Line 22						
Line 23						
MSG: 0		application				

Figure 5-9a Test RPLFRM

Command Line		rpltrn w3 2 ff3		form ff1	
				form ff3	
form ff2		form ff2	form ff3	form ff5	form ff6
form ff4		form ff8			
form ff4					
Line 21 Display:					
Line 22					
Line 23					
WSG: 0		application			

Figure 5-9b Form ff3 in W3

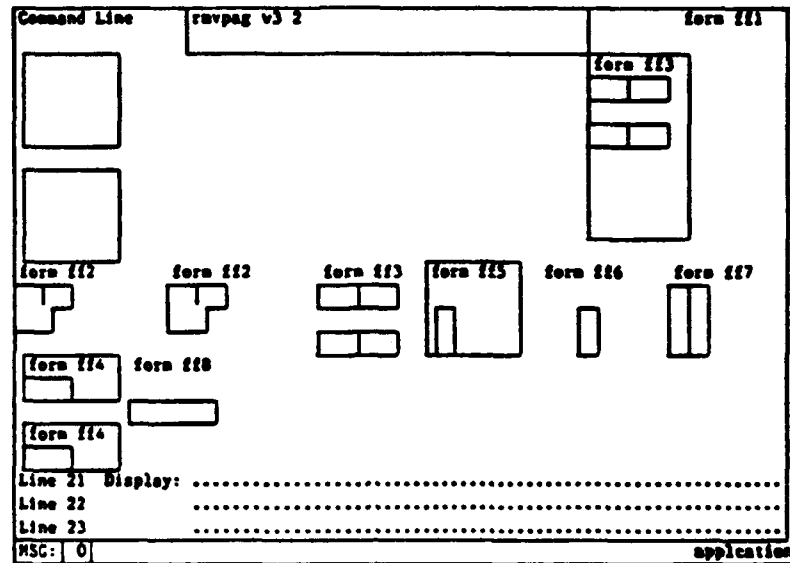


Figure 5-10a Test RMVPAG

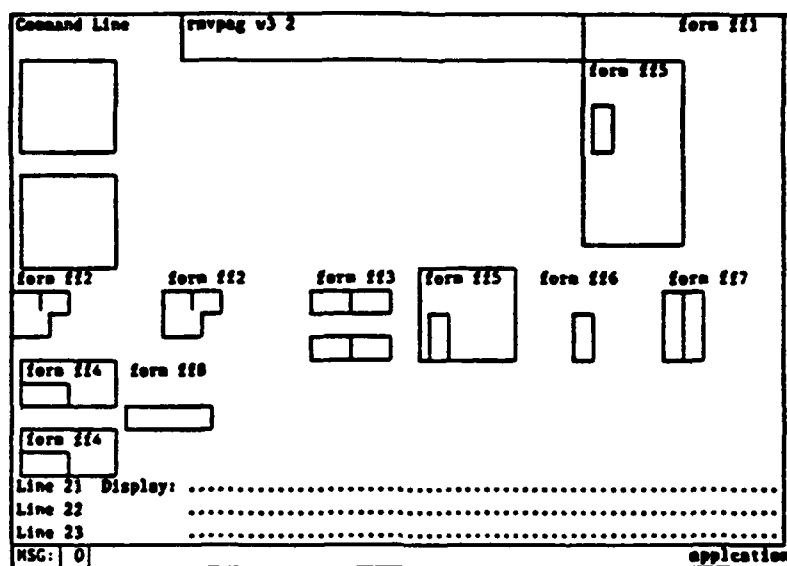


Figure 5-10b W3 with Page Removed

Command Line		gpage v3 1		form ff1	
<div></div>				<div>form ff5</div>	
<div></div>					
form ff2		form ff2	form ff3	form ff5	form ff6
<div></div>		<div></div>	<div></div>	<div></div>	<div></div>
form ff4		form ff8			
<div></div>		<div></div>			
form ff4					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
NSC: 0		application			

Figure 5-11a Test GPAGE

Command Line		gpage v3 1		form ff1	
				form ff5	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4				form ff6	
				form ff7	
Line 21 Display: VPS		.....		
Line 22		.....		
Line 23		.....		
NSC: 0				application	

Figure 5-11b GPAGE Result

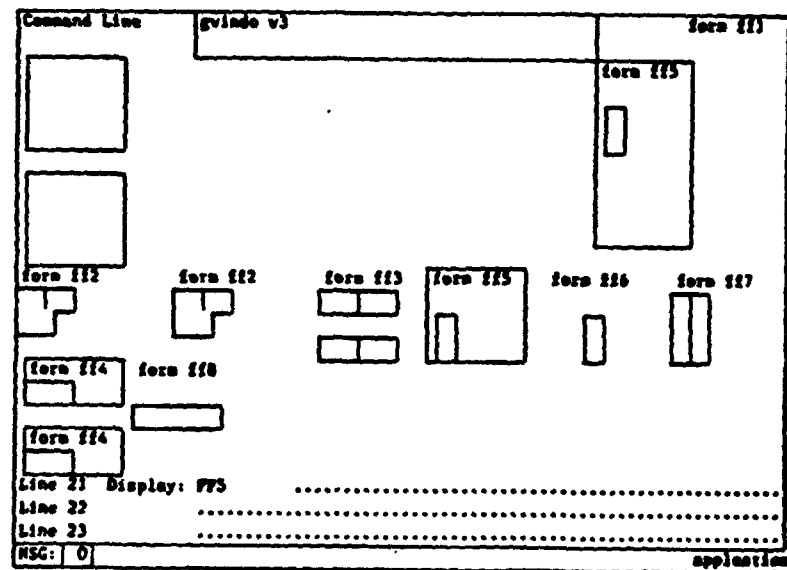


Figure 5-12a Test GWINDO

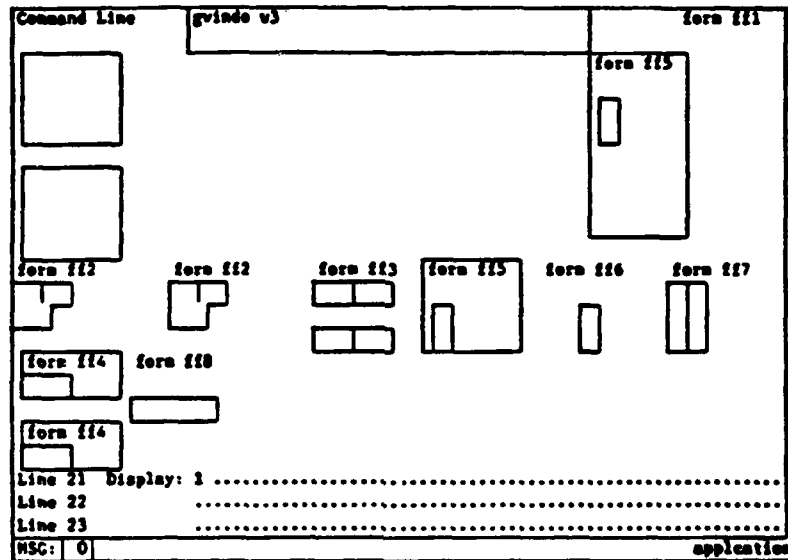


Figure 5-12b GWINDO Result

Command Line		addire v3 ff9		form ff1	
<div></div>				<div>form ff5</div>	
<div></div>					
form ff2		form ff2	form ff3	form ff5	form ff6
<div></div>		<div></div>	<div></div>	<div></div>	<div></div>
form ff4		form ff8			form ff7
<div></div>		<div></div>			
form ff4					
<div></div>					
Line 21 Display: 1					
Line 22					
Line 23					
NSC: 0		application			

Figure 5-13a Add Form ff9

Command Line		address w3 ff9		form ff1	
<div></div>		<div></div>		<div>form ff9</div>	
<div>form ff2</div>		<div>form ff2</div>		<div>form ff3</div>	
<div>form ff4</div>		<div>form ff5</div>		<div>form ff6</div>	
<div>form ff4</div>		<div>form ff7</div>		<div>form ff8</div>	
Line 21 Display:		Line 22:		Line 23:	
NSC: 0				application	

Figure 5-13b W3 with Form ff9

Command Line		rmvpg v3 2		form f11	
				form f10	
form f12		form f12	form f13	form f15	form f16
form f14		form f18			form f17
form f14					
Line 21 Display:					
Line 22					
Line 23					
MSG: 2 Requested function cannot be performed on this screen application					

Figure 5-14a Remove Page 2 of W3

Command Line		rwpag w3 2		form ff1	
<div></div>				<div>form ff5</div>	
<div></div>					
form ff2		form ff2	form ff3	form ff5	form ff6
<div></div>		<div></div>	<div></div>	<div></div>	<div></div>
form ff4		form ff8			
<div></div>		<div></div>			
form ff4					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-14b W3 with Page 2 Removed

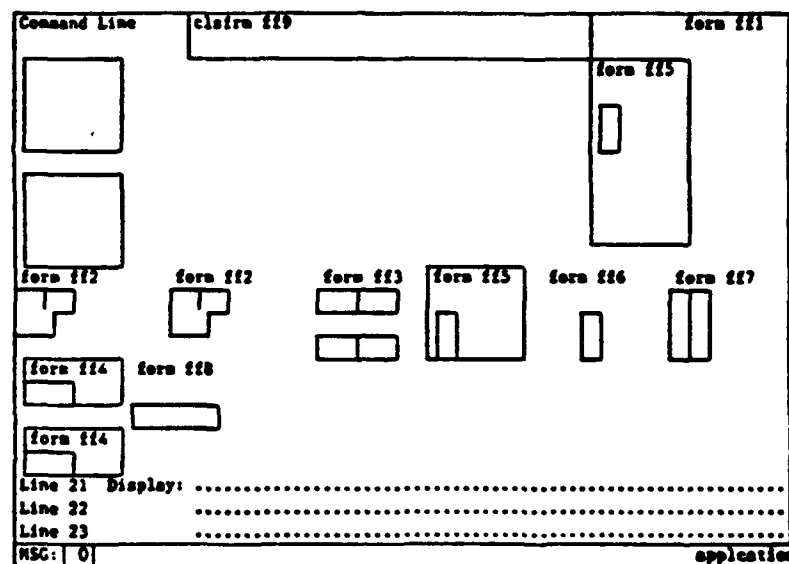


Figure 5-15a Test CLSFRM

Command Line		close f19		form f11	
				form f15	
form f12		form f12		form f13	
form f14		form f16		form f17	
form f14		form f18			
form f14					
Line 21 Display: form was closed					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-15b CLSFRM Result

Press <Enter>

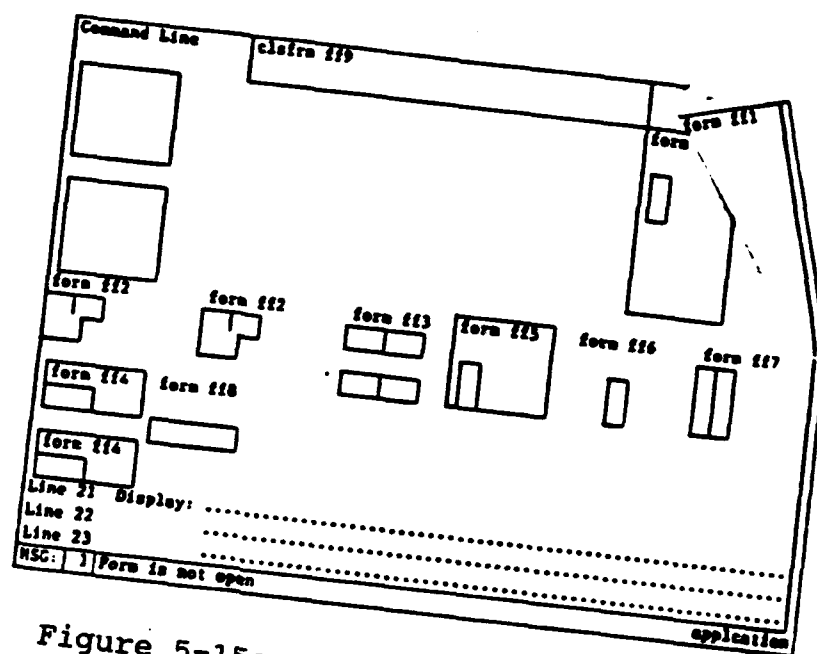


Figure 5-15c Form ff9 Already Closed

Command Line		pdata ff6.11 HELLO		form	
				form ff5	
form ff2		form ff2	form ff3	form ff5	form ff6
form ff4		form ff8			
form ff4					
Line 21 Display:					
Line 22					
Line 23					
MSG: 1 form is not open		application			

Figure 5-16a Test PDATA

Command Line		update ff6.11 B2110		form ff1		
<div></div>		<div></div>		<div>form ff5</div>		
<div></div>		<div></div>		<div></div>		
form ff2		form ff2	form ff3	form ff5	form ff6	form ff7
<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form ff4		form ff8				
<div></div>		<div></div>				
form ff4						
<div></div>						
Line 21 Display:						
Line 22						
Line 23						
MSG: 0		application				

Figure 5-16b PDATA Result

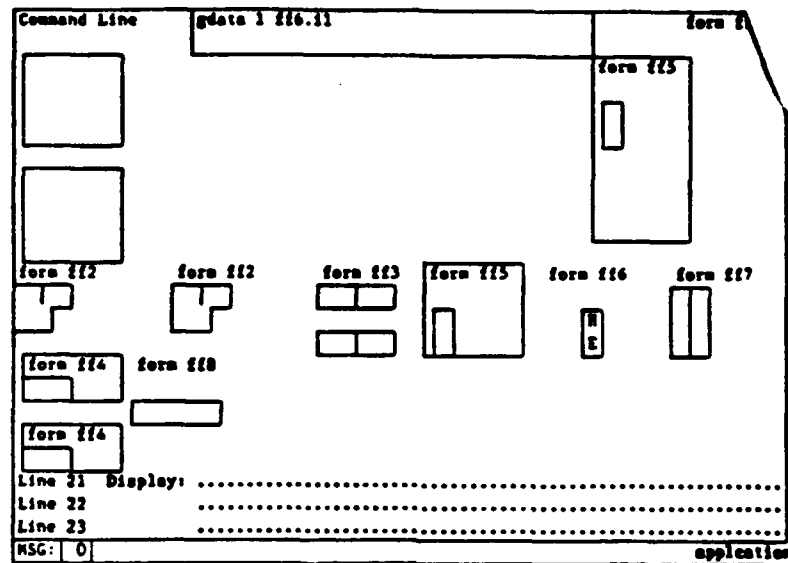


Figure 5-17a Test GDATA (Current Instance)

Command Line		gdata 1 ff6.11		form ff1	
<div></div>		<div></div>		<div>form ff5</div>	
<div>form ff2</div>		<div>form ff2</div>	<div>form ff3</div>	<div>form ff5</div>	<div>form ff6</div>
<div>form ff4</div>		<div>form ff8</div>			<div>form ff7</div>
<div>form ff4</div>					
Line 21 Display: null.....					
Line 22					
Line 23					
NSC: 0		application			

Figure 5-17b GDATA Result

Command Line		pdata f16.13 BYE		form f11		
<div></div>				<div>form f15</div>		
<div></div>						
form f12		form f12	form f13	form f15	form f16	form f17
<div></div>		<div></div>	<div></div>	<div></div>	<div>BYE</div>	<div></div>
form f14		form f18				
<div></div>		<div></div>				
form f14						
<div></div>						
Line 21 Display: null.....						
Line 22						
Line 23						
NSC: 0		application				

Figure 5-18a PDATA 'BYE'

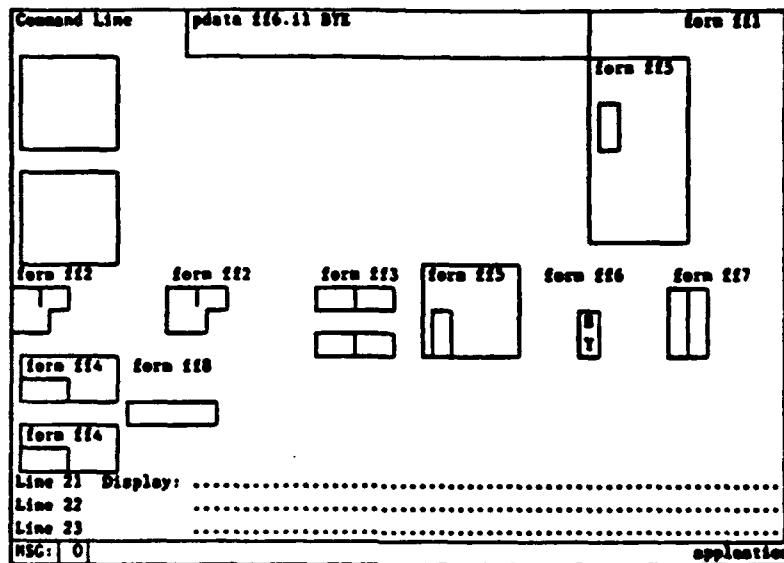


Figure 5-18b PDATA Result

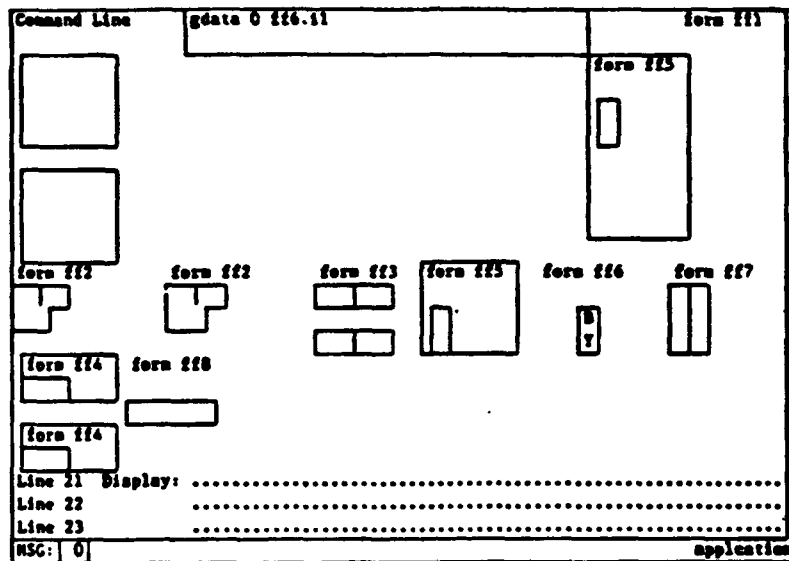


Figure 5-19a Test GDATA (Previous Instance)

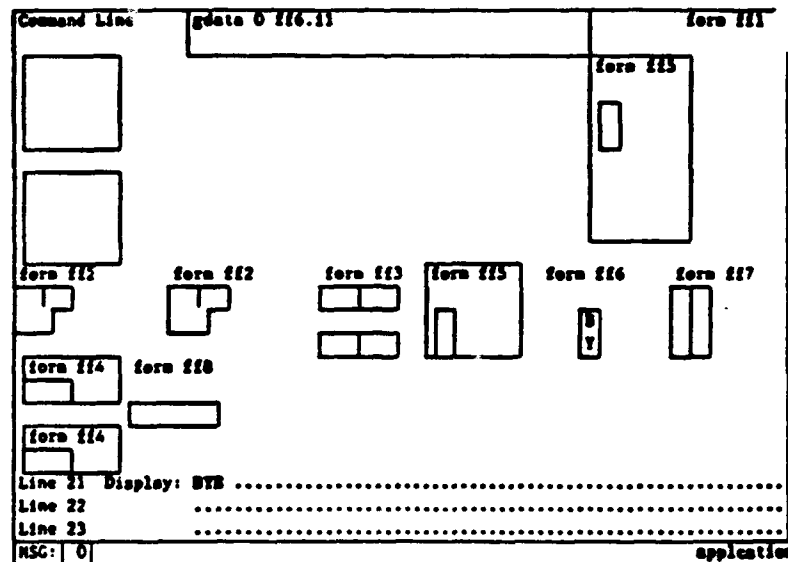


Figure 5-19b GDATA Result

Command Line		gdata 0 ff6.11		form ff1	
<div></div>				<div>form ff5</div>	
<div></div>					
form ff2		form ff2		form ff3	
<div></div>		<div></div>		<div></div>	
form ff4		form ff8		form ff5	
<div></div>		<div></div>		<div></div>	
form ff4				form ff6	
<div></div>				<div>xx</div>	
Line 21 Display: BYE				form ff7	
Line 22				<div></div>	
Line 23					
MSG: 0				application	

Figure 5-20a Change ff6 Value

Enter "xx" as shown in form ff6

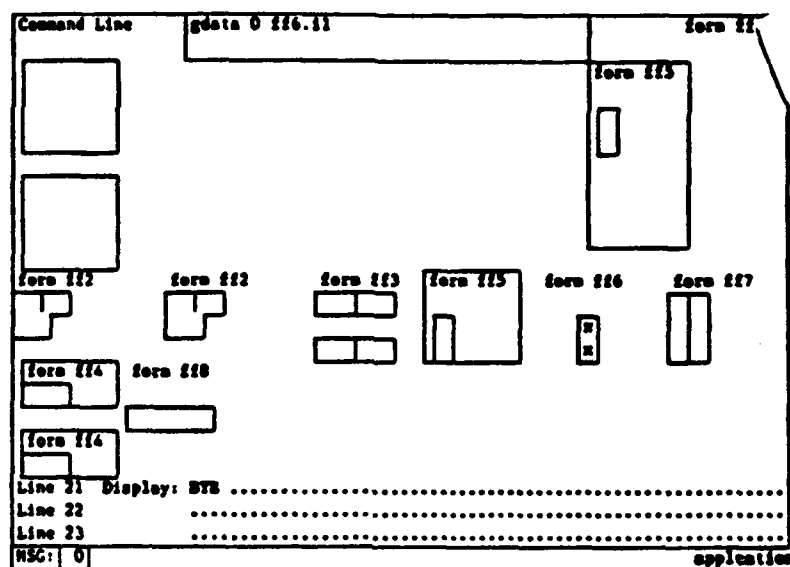


Figure 5-20b GDATA (Previous Instance)

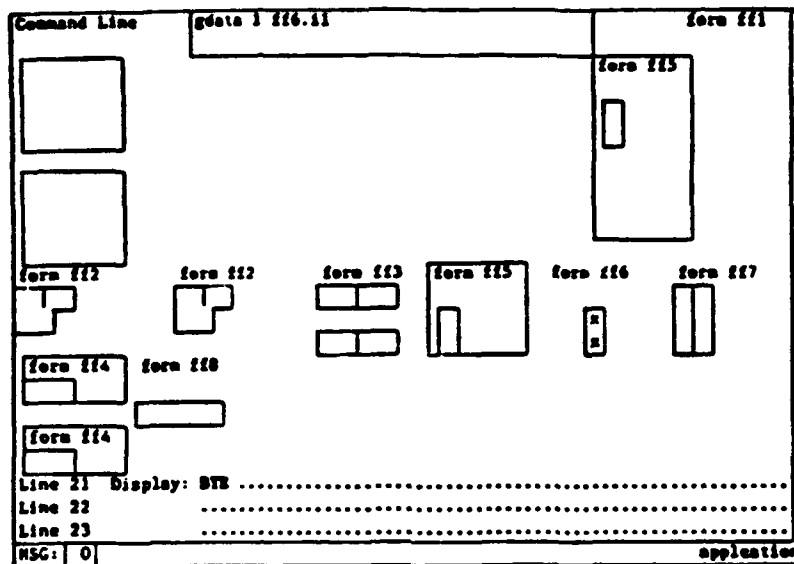


Figure 5-21a GDATA (Current Instance)

Command Line		gdate 1 ff6.11		form ff1	
				form ff5	
form ff2		form ff2	form ff3	form ff5	form ff6
form ff4		form ff8			
form ff4					
Line 21 Display: null					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-21b Current Value in Form ff6

Command Line		getatt ff6.11 0		form ff1		
<div></div>				<div>form ff5</div>		
<div></div>						
form ff2		form ff2	form ff3	form ff5	form ff6	form ff7
<div></div>		<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form ff4		form ff8				
<div></div>		<div></div>				
form ff4						
<div></div>						
Line 21 Display: m8						
Line 22						
Line 23						
MSG: 0		application				

Figure 5-22a Test GETATT

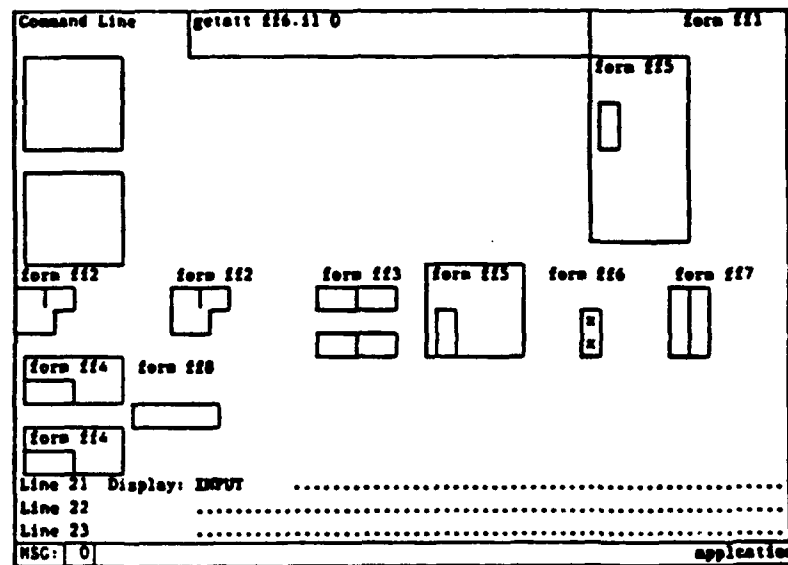


Figure 5-22b GETATT Result

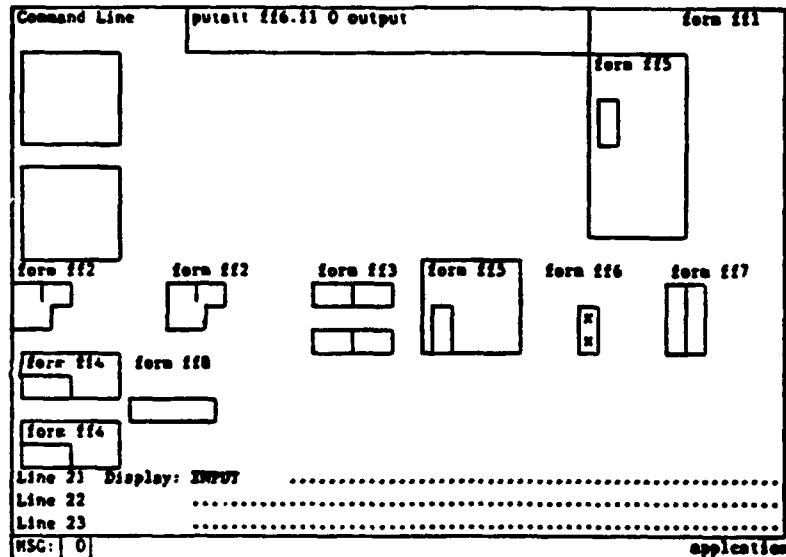


Figure 5-23a Test PUTATT (OUTPUT)

Command Line		putatt 116.11 0 output		form 111	
				form 115	
form 112		form 112		form 113	
form 114		form 118		form 115	
form 116				form 116	
				form 117	
Line 21 Display:					
Line 22					
Line 23					
HSC: 0				application	

Figure 5-23b PUTATT Result

Command Line		putatt f16.11 0 text		form f11	
				form f15	
form f12		form f12		form f13	
form f14		form f14		form f15	
form f14		form f16		form f17	
Line 21 Display:		Line 22		Line 23	
MSG: 0				application	

Figure 5-24a Test PUTATT (TEXT)

Command Line		form 111	
putatt 116.11 0 text		form 115	
		form 115	
form 112	form 112	form 113	form 115
form 114	form 110		form 116
form 114			form 117
Line 21 Display:			
Line 22			
Line 23			
MSG: 0		application	

Figure 5-24b PUTATT Result

Command Line		putbak ff6 0 white		form ff1	
<div style="border: 1px solid black; height: 40px; width: 100%;"></div> <div style="border: 1px solid black; height: 40px; width: 100%;"></div>				<div style="border: 1px solid black; height: 80px; width: 100%;"></div>	
form ff2	form ff2	form ff3	form ff5	form ff6	form ff7
<div style="border: 1px solid black; height: 20px; width: 50%;"></div>	<div style="border: 1px solid black; height: 20px; width: 50%;"></div>	<div style="border: 1px solid black; height: 20px; width: 50%;"></div>	<div style="border: 1px solid black; height: 20px; width: 50%;"></div>	x	<div style="border: 1px solid black; height: 20px; width: 50%;"></div>
form ff4	form ff8			x	
<div style="border: 1px solid black; height: 20px; width: 50%;"></div>	<div style="border: 1px solid black; height: 20px; width: 50%;"></div>				
form ff4					
<div style="border: 1px solid black; height: 20px; width: 50%;"></div>					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		applicatc			

Figure 5-25a Test PUTBAK (WHITE)

Command Line		putbak ff6 0 white		form ff1	
<div></div>		<div></div>		<div>form ff5</div>	
<div></div>		<div></div>		<div></div>	
form ff2	form ff2	form ff3	form ff5	form ff6	form ff7
<div></div>	<div></div>	<div></div>	<div></div>	<div>x</div>	<div></div>
form ff4	form ff8				
<div></div>	<div></div>				
form ff4					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-25b PUTBAK Result

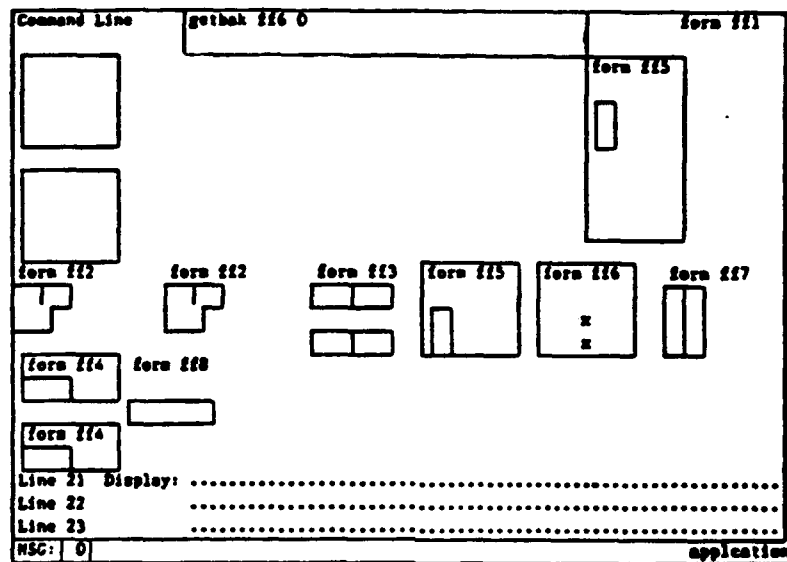


Figure 5-26a Test GETBAK

Command Line		getbak ff6 0		form ff1	
				form ff5	
form ff2		form ff2		form ff3	
form ff4		form ff6		form ff7	
form ff4					
Line 21 Display: WRITE.....					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-26b GETBAK Result

Command Line		tapatt f15.11 1 output		form f11	
<div></div>		<div></div>		<div>form f15</div>	
<div></div>		<div></div>		<div></div>	
form f12		form f12	form f13	form f15	form f16
<div></div>		<div></div>	<div></div>	<div></div>	<div>x</div>
form f14		form f18			form f17
<div></div>		<div></div>			<div></div>
form f14					
<div></div>					
Line 21 Display: WHITE.....					
Line 22					
Line 23					
NSC: 0		application			

Figure 5-27a Change Attribute

Command Line		tapett 115.11 1 output		form 111	
<div></div>		<div></div>		<div>form 115</div>	
<div>form 112</div>		<div>form 112</div>	<div>form 113</div>	<div>form 115</div>	<div>form 116</div>
<div>form 114</div>		<div>form 118</div>			<div>form 117</div>
<div>form 114</div>					
Line 21 Display: OUTPUT					
Line 22					
Line 23					
NSC: 0		application			

Figure 5-27b Attribute Changed

Press PF16

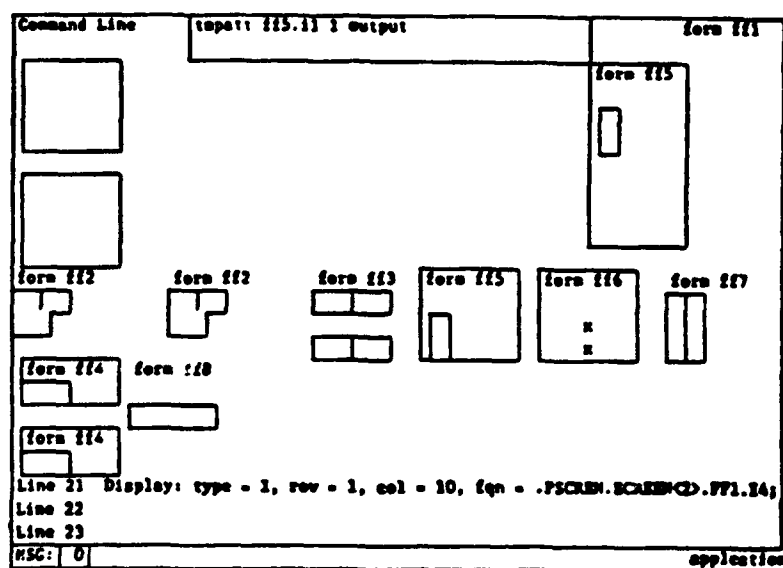


Figure 5-27c Background Attribute Restored

Command Line tempbak ff5 0 black form ff1

form ff2 form ff2 form ff3 form ff5 form ff6 form ff7

form ff4 form ff8

form ff4

Line 21 Display: type = 1, row = 1, col = 10, fqn = .PSCREEN.SCREEN(2).FF1.24;
Line 22
Line 23
MSG: 0 application

Figure 5-28a Change Form ff5 Background

Command Line		tspbak ff5 0 black		form ff1	
<div></div>		<div></div>		<div>form ff5</div>	
<div>form ff2</div>		<div>form ff2</div>		<div>form ff3</div>	
<div>form ff4</div>		<div>form ff5</div>		<div>form ff6</div>	
<div>form ff4</div>		<div>form ff6</div>		<div>form ff7</div>	
Line 21 Display: BLACK.....		Line 22		Line 23	
HSC: 0				application	

Figure 5-28b Form ff5 Background Black

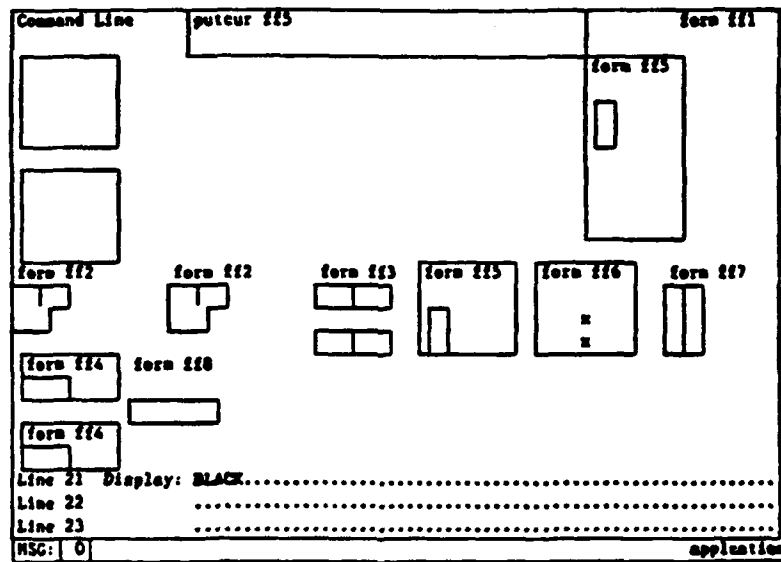


Figure 5-29a Test PUTCUR

Command Line		putcur f15		form f11	
				form f15	
form f12		form f12		form f13	
form f14		form f14		form f16	
form f14		form f14		form f17	
Line 21 Display: BLACK.....					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-29b PUTCUR Result

Press PF16

Command Line		poteur f15		form f	
				form f15	
form f12		form f12		form f13	
				form f15	
form f14		form f18		form f16	
				x	
form f14				x	
form f14					
Line 21 Display: type = F, row = 1, col = 1, fqn = .PACRM.SCREEN(1).P71.P73;					
Line 22					
Line 23					
PSC: 0		application			

Figure 5-29c Current Cursor Position

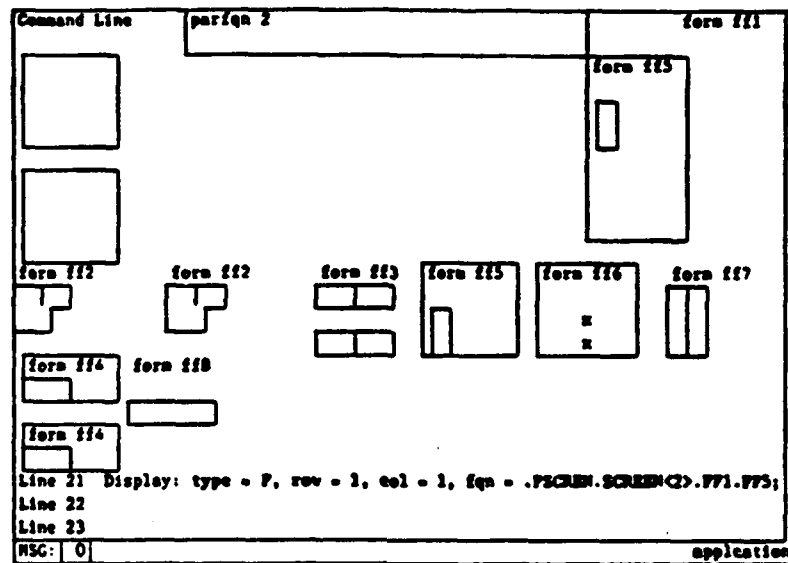


Figure 5-30a Test PARFQN

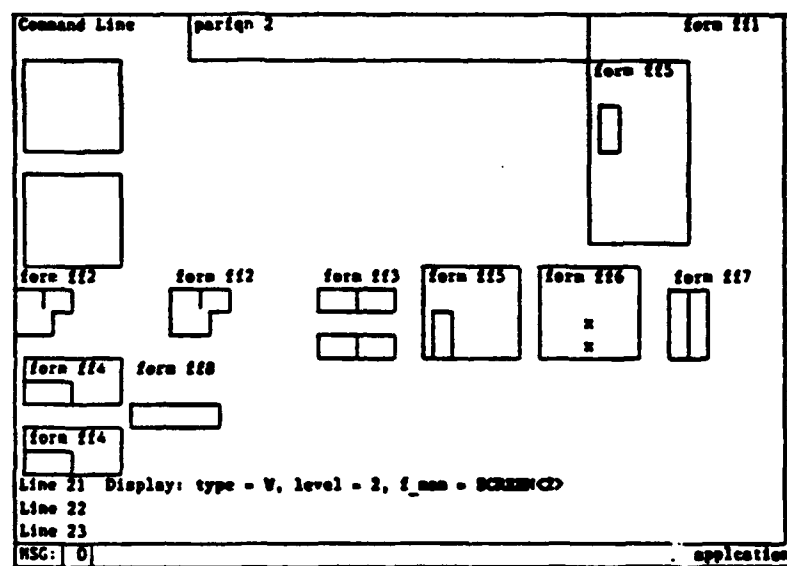


Figure 5-30b PARFQN Result

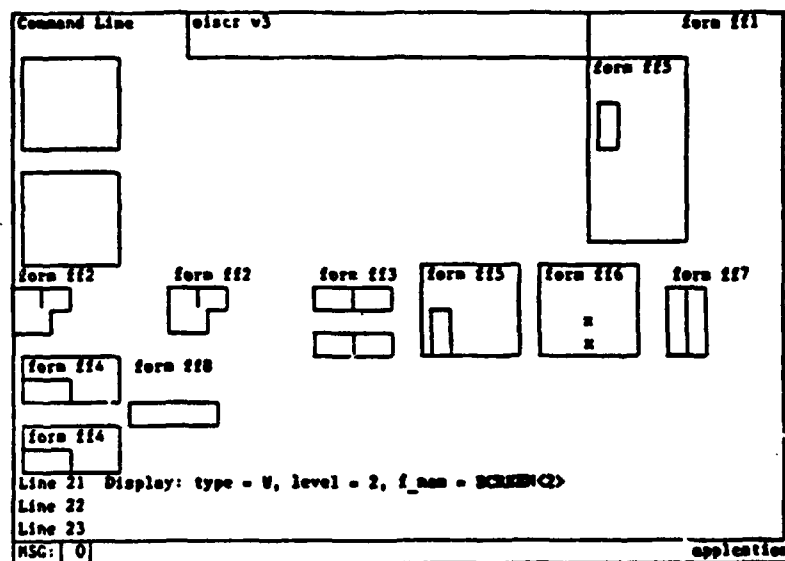


Figure 5-31a Test Terminal in Terminal

Command Line olscr v3

form ff1

form ff2

form ff3

form ff4

form ff5

form ff6

form ff7

Line 21 Display: type = V, level = 2, f_man = SCREEN<D>

Line 22

Line 23

MSG: 0

application

Figure 5-31b Test Screen

May only tab to items in Form ff5 and the MSG ITEM
Press <Enter>

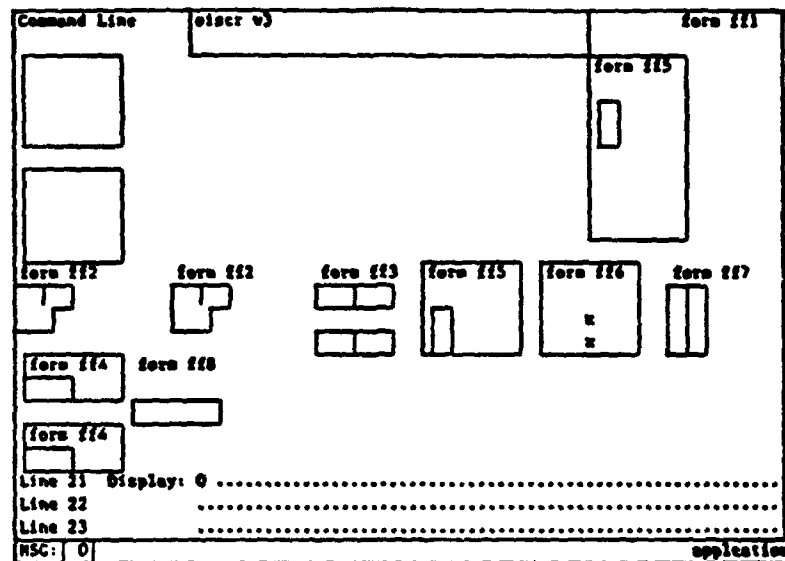


Figure 5-31c Normal Screen

Command Line		setdqn ff2(1).11		form ff1	
<div></div>				<div>form ff5</div>	
<div></div>					
form ff2		form ff2	form ff3	form ff5	form ff6
<div></div>		<div></div>	<div></div>	<div></div>	<div>x</div>
form ff4		form ff8			form ff7
<div></div>		<div></div>			<div></div>
form ff4					
<div></div>					
Line 21 Display: 0					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-32a Test SETDQN

Command Line		getdqn		form f11	
<div></div>		<div></div>		<div>form f15</div>	
<div></div>		<div></div>		<div></div>	
form f12		form f12		form f13	
<div></div>		<div></div>		<div></div>	
form f14		form f18		form f15	
<div></div>		<div></div>		<div></div>	
form f14				form f16	
<div></div>				<div>x</div>	
				form f17	
				<div>x</div>	
Line 21 Display:					
Line 22					
Line 23					
HSC: 0				application	

Figure 5-32b Test GETDQN

Command Line		getdqn		form f11		
				form f15		
form f12		form f12	form f13	form f15	form f16	form f17
					x x	
form f14		form f10				
form f14						
Line 21 Display: .PSCRM.SCREEN(2).PP1.PP2(1).11;.....						
Line 22						
Line 23						
NSC: 0		application				

Figure 5-32c GETDQN Result

Command Line		pdata 11 323456		form 111	
<div></div>		<div></div>		<div>form 115</div>	
<div>form 112</div>		<div>form 112</div>		<div>form 113</div>	
<div>form 114</div>		<div>form 116</div>		<div>form 117</div>	
<div>form 114</div>		<div>form 115</div>		<div>form 116</div>	
<div>form 114</div>		<div>form 115</div>		<div>form 116</div>	
Line 21 Display: .PSCRM.SCREEN(C>.PP1.PP2(1).I1;.....		Line 22		.....
Line 23		.....		.....
HSC: 0				application	

Figure 5-32d Enter Data

Command Line		update 11 123456		form 111		
<div></div>				<div>form 115</div> <div></div>		
<div></div>						
form 112		form 112	form 113	form 115	form 116	form 117
12/34		<div></div>	<div></div>	<div></div>	<div>x</div> <div>x</div>	<div></div>
form 114		form 118				
<div></div>		<div></div>				
form 114						
<div></div>						
Line 21 Display:						
Line 22						
Line 23						
MSG: 0		application				

Figure 5-32e Data Entered

Command Line		setdqn .pscreen		form ff1	
<div></div>		<div></div>		<div>form ff5</div>	
<div>form ff2</div>		<div>form ff2</div>		<div>form ff3</div>	
<div>12/34</div>		<div></div>		<div>form ff5</div>	
<div>form ff4</div>		<div>form ff8</div>		<div>form ff6</div>	
<div></div>		<div></div>		<div>z</div>	
<div>form ff4</div>		<div></div>		<div>form ff7</div>	
<div></div>		<div></div>		<div>z</div>	
Line 21 Display:					
Line 22					
Line 23					
NSC: 0		application			

Figure 5-32f Reset Default Qualified Name

Command Line		update 11 123456		form f11	
<div></div>				<div>form f15</div>	
<div></div>					
form f12		form f12	form f13	form f15	form f16
12/34					x .
form f14		form f18			x
form f14					
Line 21 Display:					
Line 22					
Line 23					
NSC: 0		application			

Figure 5-32g Enter Data

Command Line		pdata 11 123456		form f11	
<div></div>				<div>form f15</div>	
<div></div>					
form f12		form f12		form f13	
12/34					
form f14		form f15		form f16	
				x	
form f14				x	
Line 21 Display:					
Line 22					
Line 23					
MSG: 1		Path not unique		application	

Figure 5-32h Path Not Unique

Command Line		pdata 117 ABCDEFGHIJKLMNOPQRSTUVWXYZ		form 111	
<div></div>		<div></div>		<div>form 115</div> <div></div>	
<div></div>		<div></div>		<div></div>	
form 112		form 112		form 113	
12|34					
form 114		form 116		form 115	
form 114		form 116		form 117	
form 114					
Line 21 Display:					
Line 22					
Line 23					
MSG: 1 Path not unique					
application					

Figure 5-33a Enter Test Data

Command Line		pdata f17 ABCDEFGHIJKLMNOPQRSTUVWXYZ		form f11	
				form f15	
form f12		form f12		form f13	
12/34					
form f14		form f18			
form f14					
Line 21 Display:					
Line 22					
Line 23					
NSC: 0				application	

Figure 5-33b Test Data Entered

Press <Mode> Key to get into Scrl1/Page mode

Command Line		pdata ff7 ABCDEFGHIJKLMNOPQRSTUVWXYZ		form ff1	
				form ff5	
form ff2		form ff2		form ff3	
12/34					
form ff4		form ff6		form ff5	
				form ff6	
form ff4				form ff7	
				A B	
				C D	
				E F	
				G H	
				I J	
Line 21 Display:					
Line 22					
Line 23					
WSC: 0				scroll/page	

Figure 5-34a Scroll Up

Position cursor on 'A' in form ff7
Press PF5 (scroll up)

Command Line		pdata 117 ABCDEFGHIJKLMNOPQRSTUVWXYZ		form 111	
				form 113	
form 112		form 112		form 113	
12/34				form 115	
form 114		form 118		form 116	
form 114				form 117	
Line 21 Display:					
Line 22					
Line 23					
HSC: 0				scroll/page	

Figure 5-34b Scroll Up Result

Press PF6 (scroll down)

Command Line		pdata f17 ABCDEFGHIJKLMNOPQRSTUVWXYZ				form f11	
						form f15	
form f12		form f12		form f13		form f15	
12/34							
form f14		form f16				form f17	
						A B C D E F G H	
form f14							
Line 21 Display:							
Line 22							
Line 23							
MSC: 0		scroll/page					

Figure 5-34c Scroll Down Result

Press PF7 (scroll left)

Command Line		pdata 117 ABCDEF GHIJKLMNOPQRSTUVWXYZ		form 111	
<div></div>				<div>form 115</div>	
<div>form 112</div>		<div>form 112</div>		<div>form 113</div>	
<div>12/34</div>		<div></div>		<div>form 115</div>	
<div>form 114</div>		<div>form 118</div>		<div>form 116</div>	
<div></div>		<div></div>		<div>form 117</div>	
<div>form 114</div>				<div></div>	
<div></div>				<div></div>	
Line 21 Display:					
Line 22					
Line 23					
NSC: 0				scroll/page	

Figure 5-34d Scroll Left Result

Press PF8 (scroll right)

Command Line		pdata 117 ABCDEFGHIJKLMNOPQRSTUVWXYZ				form 111	
<div></div>						<div>form 115</div>	
<div>form 112</div>		<div>form 112</div>		<div>form 113</div>		<div>form 115</div>	
12/34						x	
<div>form 114</div>		<div>form 118</div>				x	
<div>form 114</div>						x	
Line 21 Display:						x	
Line 22						x	
Line 23						x	
MSG: 0						scr11/page	

Figure 5-34e Scroll Right Result

Press PF9 (page up)

Command Line		pdata f17 ABCDEFGHIJKLMNOPQRSTUVWXYZ				form f11	
<div></div>						<div>form f15</div>	
<div></div>							
form f12		form f12		form f13		form f15	
12/34							
form f14		form f18		form f16		form f17	
				x		N O P Q R S T U V	
form f14							
Line 21 Display:							
Line 22							
Line 23							
NSC: 0		scr11/page					

Figure 5-34f Page Up Result

Press PF10 (page down)

Command Line		pdata 117 ABCDEFGHIJKLMNOPQRSTUVWXYZ				form 113	
						form 115	
form 112		form 112		form 113		form 115	
12/34							
form 114		form 116		form 116		form 117	
form 114							
Line 21 Display:							
Line 22							
Line 23							
MSG: 0		scr11/page					

Figure 5-34g Page Down Result

Press PF11 (page left)

Command Line		pdata f17 ABCDEFGHIJKLMNOPQRSTUVWXYZ		form f11	
				form f15	
form f12		form f12		form f13	
12/34				form f15	
form f14		form f18		form f16	
form f14				form f17	
Line 21 Display:					
Line 22					
Line 23					
MSG: 0				scr11/page	

Figure 5-34h Page Left Result

Press PF12 (page right)

Command Line		pdata 11? ABCDEFGHIJKLMNOPQRSTUVWXYZ				form 111	
						form 115	
form 112		form 112		form 113		form 115	
12/34							
form 114		form 118					
form 114							
Line 21 Display:							
Line 22							
Line 23							
MSG: 0		scr11/page					

Figure 5-34i Page Right Result

Press PF11 (page left)

Command Line		pdata f17 ABCDEFGHIJKLMNOPQRSTUVWXYZ				form f11					
						form f15					
form f12		form f12		form f13		form f15		form f16		form f17	
12/34		1						x		C D G H K L	
form f14		form f18									
form f14											
Line 21 Display:											
Line 22											
Line 23											
NSC: 0		scr11/page									

Figure 5-34j Test PMSGCLC

Press PF11 (page left)

Command Line		pdata f17 ABCDEF GHIJ KLMNOPQRSTU VWXYZ				form f11	
<div></div>						<div>form f15</div>	
<div>form f12</div>		<div>form f12</div>		<div>form f13</div>		<div>form f15</div>	
<div>form f14</div>		<div>form f16</div>		<div>form f16</div>		<div>form f17</div>	
<div>form f14</div>		<div>form f18</div>		<div>form f18</div>		<div>form f18</div>	
<div>form f14</div>		<div>form f18</div>		<div>form f18</div>		<div>form f18</div>	
Line 21 Display:		Line 22					
Line 23		Line 23					
MSG: 1 End of scrolling section reached		scr11/page					

Figure 5-34k PMSGLC Result

Press PF12 (page right)

Command Line		pdate 117 ABCDEFGHIJKLMNOPQRSTUVWXYZ				form 111	
<div></div>				<div></div>		<div></div>	
<div></div>						<div></div>	
form 112		form 112		form 113		form 115	
12|34							
<div></div>		<div></div>		<div></div>		<div></div>	
form 114		form 118					
<div></div>		<div></div>					
form 114							
<div></div>							
Line 21 Display:							
Line 22							
Line 23							
NSC: 0		scrll/page					

Figure 5-341 Page Up

Press PF9 (page up)

Command Line		pdata 117 ABCDEFGHIJKLMNOPQRSTUVWXYZ				form 111	
						form 115	
form 112		form 112		form 113		form 115	
12/34		1					
form 114		form 118				form 116	
						x	
						x	
form 114						form 117	
						H R O V	
Line 21 Display:							
Line 22							
Line 23							
MSG: 0		scroll/page					

Figure 5-34m Test PMSGLS

Press PF9 (page up)

Command Line		pdate f17 ABCDEFGHIJKLMNOPQRSTUVWXYZ		form f11	
<div></div>				<div>form f15</div>	
<div>form f12</div>		<div>form f12</div>		<div>form f13</div>	
<div>12/34</div>		<div></div>		<div></div>	
<div>form f14</div>		<div>form f16</div>		<div>form f17</div>	
<div></div>		<div></div>		<div></div>	
<div>form f14</div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
Line 21 Display:					
Line 22					
Line 23					
WSC: 1 End of scrolling section reached					
scr11/page					

Figure 5-34n PMSGSL Result

Press PF10 (page down)

Command Line		data f17 ABCDEFGHIJKLMNOPQRSTUVWXYZ				form f11	
						form f15	
form f12		form f12		form f13		form f15	
1234							
form f14		form f16		form f16		form f17	
						A B C D E F G H	
form f14		form f16					
Line 21 Display:							
Line 22							
Line 23							
NSC: 0		scr11/page					

Figure 5-34o Scrolling Ended

Command Line		inqldv		form f11	
				form f15	
form f12		form f12		form f13	
12/34					
form f14		form f18		form f15	
				form f16	
form f14				form f17	
				A B	
				X Y	
				I J	
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		scrll/page			

Figure 5-35a Test INQLDV

Command Line		inqldv		form f11	
				form f15	
form f12		form f12		form f13	
12/34					
form f14		form f16		form f17	
		a		a	
form f14				a	
				a	
Line 21 Display: logical device number = 5					
Line 22					
Line 23					
MSG: 0		scrll/page			

Figure 5-35b INQLDV Result

Logical device numbers are determined at run time. Substitute the number you get (if it's not '5') wherever '5' appears in the remainder of this test.

Command Line		getldv 5		form f11	
				form f15	
form f12		form f12		form f13	
17/34					
form f14		form f18		form f15	
				x	
				x	
form f14				form f16	
				x	
				form f17	
				A B	
				E P	
				I J	
Line 21 Display: logical device number = 5					
Line 22					
Line 23					
MSG: 0		scrll/page			

Figure 5-36a Test GETLDV

Command Line		getldv 5		form f11	
				form f15	
form f12		form f12		form f13	
12/34					
form f14		form f18		form f15	
				x	
				x	
form f14				form f16	
				x	
				form f17	
				A B	
				E P	
				I J	
Line 21 Display: Logical Device 5: Row = 1, Col = 1, Width = 80 Depth = 23					
Line 22					
Line 23					
NSC: 0		scr11/page			

Figure 5-36b GETLDV Result

Command Line		setldv 5 3 3 50 15		form f11	
				form f15	
form f12		form f12		form f13	
12/34					
form f14		form f18			
form f16					
Line 21 Display: Logical Device 5: Row = 1, Col = 1, Width = 80 Depth = 23					
Line 22					
Line 23					
MSG: 0		scr11/page			

Figure 5-37a Test SETLDV (Smaller)

ISS TEST BED VERSION 3.3

Command Line: setldv 3 3 3 50 15 EMC Role:

Device Name:

form ff2 form ff2 form ff3 form ff

32/34 1

MSG: scroll/page

Figure 5-37b SETLDV Result

ISS TEST BED VERSION 2.3

Command Line: setldv 5 1 1 80 23 ENC Role:

Device Name:

form ff2 form ff2 form ff3 form ff

12/34 1 2 3 4

MSG: scroll/page

Figure 5-38a Test SETLDV (Larger)

Command Line		setldv 5 1 1 80 23		form f11		
				form f15		
form f12		form f12	form f13	form f15	form f16	form f17
12/34					x	A B E P I J
form f14		form f18				
form f14						
Line 2: Display:						
Line 22						
Line 23						
MSG: 0		scr11/page				

Figure 5-38b SETLDV Result

Command Line		opnldv		form f11	
				form f15	
form f12		form f12		form f13	
12/34					
				form f15	
form f14		form f18		form f16	
				x	
form f14				x	
				form f17	
				A B	
				E F	
				I J	
Line 21 Display:					
Line 22					
Line 23					
NSC: 0		scr11/page			

Figure 5-39a Test OPNLDV

Command Line		form ff1				
form ff2		form ff2	form ff3	form ff5	form ff6	form ff7
form ff4		form ff8				
form ff4						
Line 21 Display: Opened and changed to logical device: 26						
Line 22						
Line 23						
MSG: 0		scr11/page				

Figure 5-39b OPNLDV Result

Logical device numbers are determined at run time. Substitute the number you get (if it's not '26') wherever '26' appears in the remainder of this test.

Command Line		chglv 5		form f11	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form f12		form f12		form f13	
<div></div>		<div></div>		<div></div>	
form f14		form f18		form f15	
<div></div>		<div></div>		<div></div>	
form f14				form f16	
<div></div>				<div></div>	
				form f17	
				<div></div>	
Line 21 Display: Opened and changed to logical device: 26					
Line 22					
Line 23					
MSG: 0		scr11/page			

Figure 5-40a Test CHGLDV

Command Line		chgldev 5		form ff1	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form ff2		form ff2		form ff3	
<div></div>		<div></div>		<div></div>	
form ff4		form ff5		form ff6	
<div></div>		<div></div>		<div></div>	
form ff4		form ff7		form ff8	
<div></div>		<div></div>		<div></div>	
Line 21 Display: Opened and changed to logical device: 26					
Line 22					
Line 23					
HSC: 0		scroll/page			

Figure 5-40b CHGLDV Result

All fields non-enterable.
Press <Mode> key to get into window manager mode.

Command Line		chgdev 5		form f11	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form f12		form f12		form f13	
<div></div>		<div></div>		<div></div>	
form f14		form f18		form f15	
<div></div>		<div></div>		<div></div>	
form f14				form f16	
<div></div>				<div></div>	
				form f17	
				<div></div>	
Line 21 Display: Opened and changed to logical device: 26					
Line 22					
Line 23					
NSC: 0		window mgr			

Figure 5-41a Select Application

Press PF14 (Select AP)

Command Line		chgldev 5		form f11	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form f12	form f12	form f13	form f15	form f16	form f17
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form f14	form f18				
<div></div>	<div></div>				
form f14					
<div></div>					
Line 21 Display: Opened and changed to logical device: 26					
Line 22					
Line 23					
MSG: 1 Window is selected		window mgr			

Figure 5-41b Application Selected (LDV 5)

Command Line		chgldv 5		form ff1	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form ff2		form ff2		form ff3	
<div></div>		<div></div>		<div></div>	
form ff4		form ff8		form ff5	
<div></div>		<div></div>		<div></div>	
form ff4				form ff6	
<div></div>				<div></div>	
				form ff7	
				<div></div>	
Line 21 Display: Opened and changed to logical device: 26					
Line 22					
Line 23					
MSG: 1 Window is selected window mgr					

Figure 5-42a Test Size Key

Position cursor above 'm' in 'form ff3'
then press PF9 (size).

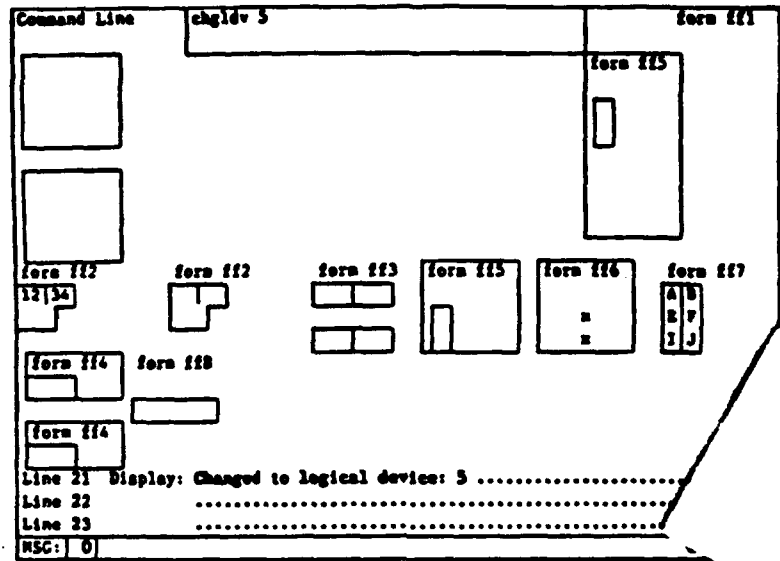


Figure 5-42b Size Result

Command Line		chgldev 3		form f11	
[]		[]		form f15	
[]		[]		[]	
form f12		form f12		form f13	
12/34		[]		form f15	
form f14		form f18		form f16	
[]		[]		[]	
form f14		[]		form f17	
[]		[]		[]	
Line 21 Display: Changed to logical device: 5					
Line 22					
Line 23					
HSC: 0		window mgr			

Figure 5-43a Test Location Key

Position cursor as shown and press PF10 (Location)

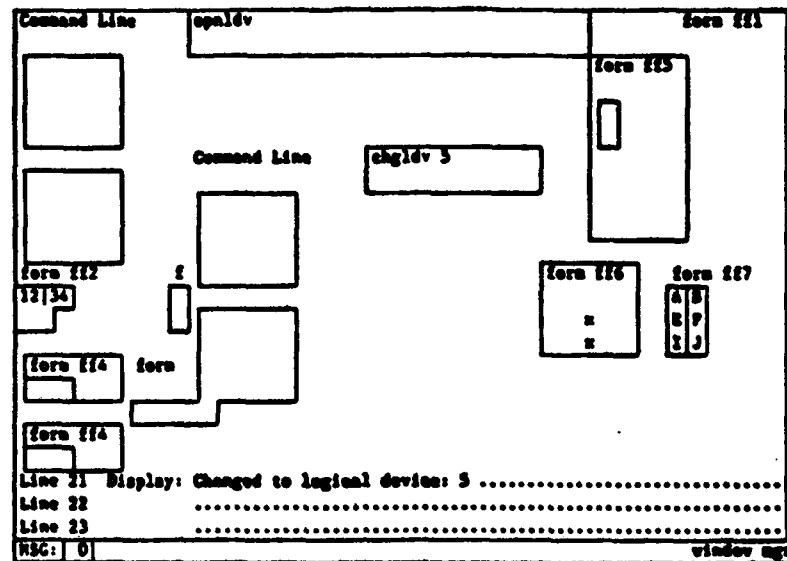


Figure 5-43b Location Result

Command Line		addfru v3 ff1		form ff1	
				form ff5	
		Command Line		chgdev 5	
form ff2		f		form ff6	
				x	
form ff4		form		form ff7	
				W3	
form ff4				EP	
				SJ	
Line 21 Display: Changed to logical device: 5					
Line 22					
Line 23					
NSC: 0		window age			

Figure 5-44a Add Form ff1

Command Line		addfrn v3 ffl		form ffl	
		Command L			
		Command Line		chglv 3	
form ffl2				form ffl6	
form ffl4		form		form ffl7	
form ffl4					
Line 21 Display:					
Line 22					
Line 23					
NSC: 0		window mgr			

Figure 5-44b Form ffl Added

Figure 5-45a Test Select Window

Position cursor on 'C' in 'Command L' below form ff1 and press PF11 (Select Window).

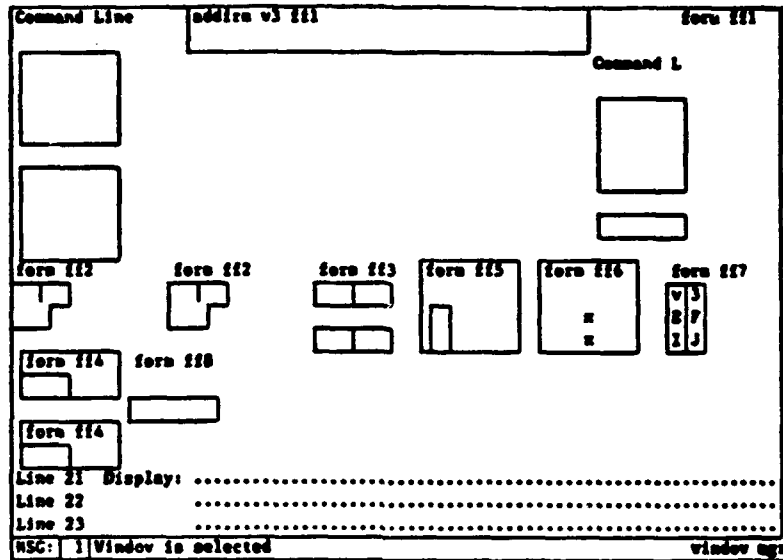


Figure 5-45b Select Window Result

Command Line		addira v3 f11		form f11	
				Command L	
form f12		form f12		form f13	
form f14		form f18		form f15	
form f14				form f16	
				form f17	
Line 21 Display:					
Line 22					
Line 23					
MSG: 1 Window is selected				window agr	

Figure 5-46a Test Page Up

Position cursor as shown and press PF5 (Page Up).

Command Line		add ra 03 f11		form f11	
form f11		form f12	form f13	form f15	form f16
form f14		form f18			
form f14					
Line 21 Display:					
Line 22					
Line 23					
RSC: 0		window mgr			

Figure 5-46b Page Up Result

Command Line addira v3 f11 form f11

form f12

form f13 form f14 form f15 form f16 form f17

form f12

form f14 form f15

Line 21 Display:
Line 22
Line 23

MSC: 0 window mgr

Figure 5-47a Test Page Down

Leave the cursor positioned as shown on the screen and press PF6 (Page Down).

Command Line		addira v3 f11		form f11	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form f12		form f12		form f13	
<div></div>		<div></div>		<div></div>	
form f14		form f15		form f16	
<div></div>		<div></div>		<div></div>	
form f14		form f16		form f17	
<div></div>		<div></div>		<div></div>	
Line 21 Display:					
Line 22					
Line 23					
NSC: 0		window age			

Figure 5-47b Page Down Result

Press PF15 (Home View).

Command Line		addrn v3 f11		form f11	
				Command L	
form f12		form f12	form f13	form f15	form f16
form f14		form f18			
form f14					
Line 21 Display:					
Line 22					
Line 23					
WSC: 0		window mgr			

Figure 5-47c Home View Result

Command Line		addfrm v3 ff1		form ff1	
				Command L	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4				form ff6	
				form ff7	
Line 21 Display:					
Line 22					
Line 23					
NSC: 0				window mgr	

Figure 5-48a Test Page Left

Position cursor on 'L' in 'Command L' below form ff1 and press PF7 (page left).

Command Line		addira v3 f11		form f11	
				Line	
form f12		form f12		form f13	
form f14		form f18			
form f14					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0				window agr	

Figure 5-48b Page Left Result

Command Line		addrm v3 ffl		form ffl	
				Line	
				!	
				.	
				□	
form ff2		form ff2		form ff3	
form ff4		form ff0		form ff5	
form ff4				form ff6	
				x	
				x	
				form ff7	
				v3	
				E7	
				IJ	
Line 21 Display:					
Line 22					
Line 23					
NSC: 0		window age			

Figure 5-49a Test Page Right

Position cursor on 'L' in 'Line' below form ffl and press PF8 (page right).

Command Line		address vJ f11		form f11	
		Command L			
form f12		form f12		form f13	
				form f15	
form f14		form f16		form f17	
form f14					
Line 21 Display:					
Line 22					
Line 23					
NSG: 0				window agr	

Figure 5-49b Page Right Result

Press PF12 (unselect window)

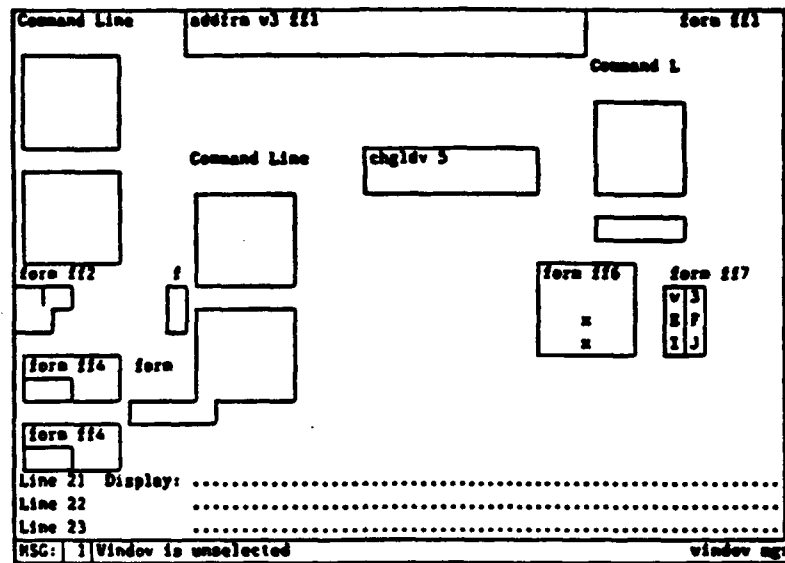


Figure 5-49c Unselect Window Result

Press <Mode> key to get into status mode.

Command Line addirm v3 f11 form f11

Command L

Command Line chgldv 5

form f11

form f12

form f14

form f16

form f17

Line 21 Display:
Line 22:
Line 23:
MSC: 3 Window is unselected status

Figure 5-50a Test APSTAT

Press PF6 (APSTAT) to display Application Status Form

Application Status										
Device				Window Name	Location		Display Size		Viewport Offset	
Application	Type	Name	Pri		Row	Col	W	D	Row	Col
SDARTEST22	VT100	TT:	1		7	19	36	11	0	0
SDARTEST22				SCREEN	1	1	79	69	0	0
SDARTEST22				WVF	3	45	0	0	0	0
SDARTEST22				V3	3	60	10	8	0	0
SDARTEST22	VT100	TT:	2		1	1	80	23	0	0
SDARTEST22				SCREEN	1	1	79	69	0	0
SDARTEST22				WVF	3	45	0	0	0	0
SDARTEST22				V3	3	60	10	8	0	0
SDARTEST22				WVF	3	45	0	0	0	0
SDARTEST22				V3	3	60	10	8	0	0
NSDU	VT100	TT:	3		1	1	80	23	0	0

MSG: 0 status

Figure 5-50b Application Status Form

The Device Type field value may be different than shown in this figure. This value is assigned by the NTM at run time.

Application Status										
Device				Window Name	Location		Display Size		Viewport Offset	
Application	Type	Name	Pri		Row	Col	W	H	Row	Col

SDARTEST22	SDPRINTERZ	PRINT.DEV	1		7	19	36	11	0	0
SDARTEST22				SCREEN	1	1	79	69	0	0
SDARTEST22				WMP	3	45	0	0	0	0
SDARTEST22				W3	3	60	10	8	0	0
SDARTEST22	VT100	TT:	2		1	1	80	23	0	0
SDARTEST22				SCREEN	1	1	79	69	0	0
SDARTEST22				WMP	3	45	0	0	0	0
SDARTEST22				W3	3	60	10	8	0	0
SDARTEST22				WMP	3	45	0	0	0	0
SDARTEST22				W3	3	60	10	8	0	0
MEMU	VT100	TT:	3		1	1	80	23	0	0
NSC: 0					status					

Figure 5-50c Manually Test Move LDV

Change form as shown and press <ENTER>. NOTE: 'SDPRINTERZ' and 'PRINT.DEV' must be entered in upper case for this release.

Command Line		addrn v3 f11		form f11	
		Command L			
form f12		form f12		form f13	
form f14		form f15		form f16	
form f14		form f16		form f17	
Line 21 Display:		Line 22		Line 23	
MSG: 0				status	

Figure 5-50d Move LDV Result

Press PF6 (APSTAT) PF6 to display Application Status Form.

Application Status										
Application	Device			Window Name	Location		Display Size		Viewport Offset	
	Type	Name	Pri		Row	Col	V	D	Row	Col
SDARTEST22	SDPRINTER2	PRINT.DEV			7	19	36	11	0	0
SDARTEST22				SCREEN	1	1	79	24	0	0
SDARTEST22				WM7	3	45	0	0	0	0
SDARTEST22				W3	3	60	10	8	0	0
SDARTEST22	VT100	TT:	1		1	1	80	23	0	0
SDARTEST22				SCREEN	1	1	79	69	0	0
SDARTEST22				WM7	3	45	0	0	0	0
SDARTEST22				W3	3	60	10	8	0	0
SDARTEST22				WM7	3	45	0	0	0	0
SDARTEST22				W3	3	60	10	8	0	0
MENU	VT100	TT:	2		1	1	80	23	0	0

RSC: 0 status

Figure 5-51a Application Status Form

Application Status										
Device				Window Name	Location		Display Size		Viewport Offset	
Application	Type	Name	Pri		Row	Col	V	D	Row	Col
SDARTEST22			1		7	19	36	11	0	0
SDARTEST22				SCREEN	1	1	79	24	0	0
SDARTEST22				W3	3	45	0	0	0	0
SDARTEST22				W3	3	60	10	8	0	0
SDARTEST22	VT100	TT:	2		1	1	80	23	0	0
SDARTEST22				SCREEN	1	1	79	69	0	0
SDARTEST22				W3	3	45	0	0	0	0
SDARTEST22				W3	3	60	10	8	0	0
SDARTEST22				W3	3	45	0	0	0	0
SDARTEST22				W3	3	60	10	8	0	0
MENU	VT100	TT:	3		1	1	80	23	0	0

HSG: 0 status

Figure 5-51b Return LDV

Change form as shown and press <ENTER>.

Command Line		addrc v3 f11		form f11							
		Command L									
		Command Line		chgldv 5							
form f12		f		form f16							
form f14		form		form f17							
form f14				<table border="1"> <tr><td>v</td><td>3</td></tr> <tr><td>E</td><td>F</td></tr> <tr><td>3</td><td>J</td></tr> </table>		v	3	E	F	3	J
v	3										
E	F										
3	J										
Line 21 Display:											
Line 22											
Line 23											
RSC: 0		status									

Figure 5-51c Return LDV Result

Command Line		MOVLDV 26 PPUTP.DAT SUPERINTER2		form 111
		Command 1		
	Command Line	chgldv 5		
form 112			form 116	form 117
			x	x
form 114	form			
form 114				
Line 21 Display:				
Line 22				
Line 23				
HSC: 0		status		

Figure 5-52a Test MOVLDV

Enter MOVLDV information in upper case.

Command Line		NOVLDV 26 PPUPP.DAT SPRINTER2		form 111	
		Command 1			
form 113		form 112		form 115	
form 114		form 110		form 116	
form 114				form 117	
Line 21 Display:					
Line 22					
Line 23					
HSC: 0				status	

Figure 5-52b MOVLDV Result

Press PF6 (APSTAT) to display Application Status Form.

Application Status										
Device				Window Name	Location		Display Size		Viewport Offset	
Application	Type	Name	Pri		Row	Col	V	B	Row	Col
SDA1TEST22	EDPRINTER2	PFUTP.DAT			1	1	80	24	0	0
SDA1TEST22				SCREEN	1	1	79	23	0	0
SDA1TEST22				WVF	3	43	0	0	0	0
SDA1TEST22				W3	3	60	10	8	0	0
SDA1TEST22	VT100	TT:	1		1	1	80	23	0	0
SDA1TEST22				SCREEN	1	1	79	20	0	0
SDA1TEST22				WVF	3	43	0	0	0	0
SDA1TEST22				W3	3	60	10	8	0	0
SDA1TEST22				WVF	3	43	0	0	0	0
SDA1TEST22				W3	3	60	10	8	0	0
NEWU	VT100	TT:	2		1	1	80	23	0	0

MSG: 0 status

Figure 5-52c Application Status Form

Application Status										
Device				Window Name	Location		Display Size		Viewport Offset	
Application	Type	Name	Pri		Row	Col	W	D	Row	Col
SDARTEST22			1		1	1	80	24	0	0
SDARTEST22				SCREEN	1	1	79	23	0	0
SDARTEST22				WVF	3	45	0	0	0	0
SDARTEST22				V3	3	60	10	8	0	0
SDARTEST22	VT100	TT:	2		1	1	80	23	0	0
SDARTEST22				SCREEN	1	1	79	20	0	0
SDARTEST22				WVF	3	45	0	0	0	0
SDARTEST22				V3	3	60	10	8	0	0
SDARTEST22				WVF	3	45	0	0	0	0
SDARTEST22				V3	3	60	10	8	0	0
HEBRU	VT100	TT:	3		1	1	80	23	0	0

NSC: 0 status

Figure 5-53a Return LDV

Change form as shown and press <ENTER>

The screenshot displays a window manager interface with the following elements:

- Command Line:** Located at the top left, containing the text "chgldv 5".
- Windows:** Several windows are open, labeled as follows:
 - form f11:** A large window at the top right.
 - form f12:** Two small windows on the left side.
 - form f13:** A window in the center with two horizontal bars.
 - form f15:** A window in the center with a vertical bar.
 - form f16:** A small window to the right of form f15.
 - form f17:** A small window on the far right.
 - form f14:** Two small windows on the left side, below form f12.
 - form f18:** A small window in the center, below form f13.
- Status Bar:** At the bottom, it shows "Line 21 Display: Opened and changed to logical device: 26", "Line 22", "Line 23", "MSG: 0", and "status" on the right.

Figure 5-53b Return LDV Result

Press <Mode> key to get into window manager mode and press PF14 (SELECT AP).

Command Line		chgldv 5		form f11	
form f12		form f12		form f13	
form f14		form f14		form f15	
form f14		form f14		form f16	
form f14		form f14		form f17	
Line 21 Display: Opened and changed to logical device: 26					
Line 22					
Line 23					
MSG: 1 Window is selected window mgr					

Figure 5-53c Change LDV Location

Position cursor 1 line below the Command Line as shown and press PF10 (LOCATION).

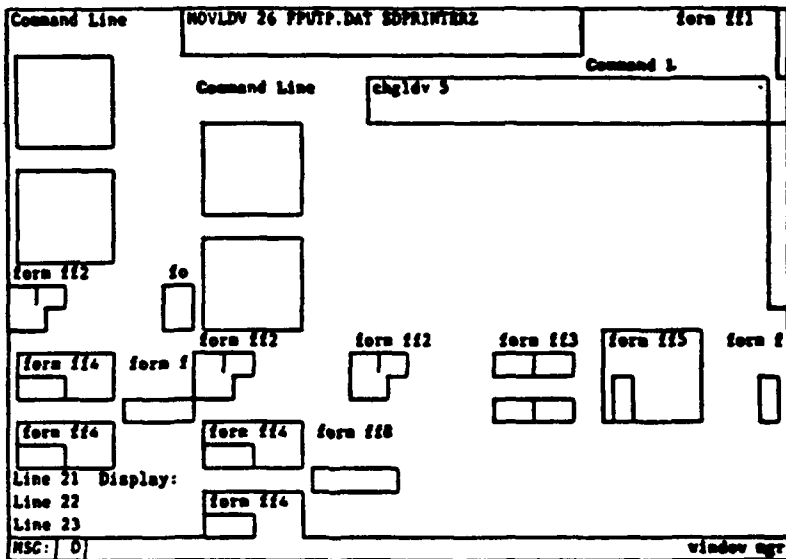


Figure 5-53d Change Location Result

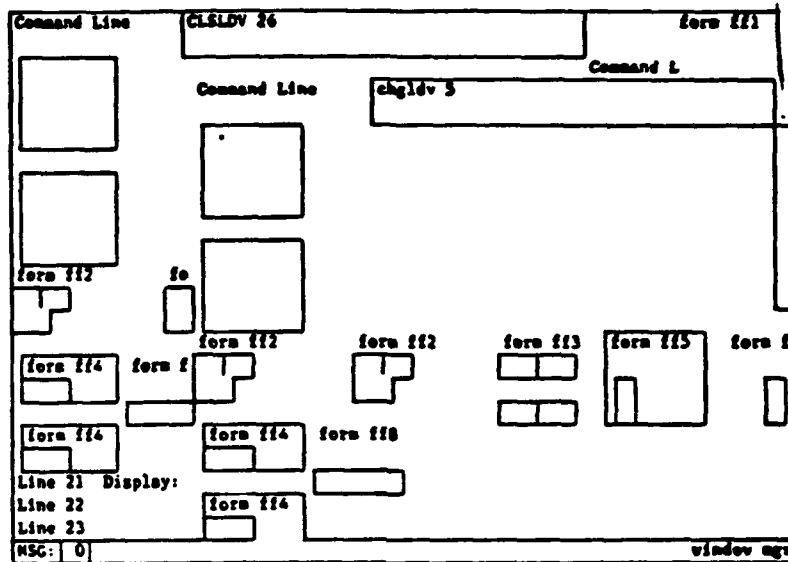


Figure 5-54a Test CLSLDV

Command Line		CLSLOV 26		form f11	
				Command 1	
form f12		form f12	form f13	form f15	form f16
form f14		form f18			
form f14					
Line 21 Display: Closed logical device: 26					
Line 22					
Line 23					
MSG: 0		window mgr			

Figure 5-54b CLSLDV Result

Press PF13 (FUNCTION)

IISS TEST BED VERSION 2.3

Date: 11/30/87 Time: 13:01:41 User ID: MORENC Role:

Function: Device Type: Device Name:

NSC: ☐ Window is selected window mgr

Figure 5-54c IISS Function Screen

```

1155 TEST BED VERSION 1.3
-----
Date: 11/30/87    Time: 13:01:41    User ID: NORDMC    Role: MANAGER
Function: RM      Device Type:      Device Name:
MSG: 1 Window is selected
window up

```

Figure 5-55a Start: MM

IISS TEST BED VERSION 3.3			
Date: 11/30/87	Time: 13:01:45	User ID: MOREMC	Role: <input type="text" value="MANAGER"/>
Function: <input type="text"/>	Device Type: <input type="text"/>	Device Name: <input type="text"/>	
MSG: <input type="text" value="0"/>		window mgr	

Figure 5-55b IISS Function Screen

1155 TEST BED VERSION 2.3			
Date: 11/30/87	Time: 13:01:45	User ID: MORENC	Role: <input type="text" value="MANAGER"/>
Function: <input type="text" value="TE"/>	Device Type: <input type="text"/>	Device Name: <input type="text"/>	
MSG: <input type="text" value="0"/>		window mgr	

Figure 5-56a Start TE

IISS TEST BED VERSION 2.3			
Date: 11/30/87	Time: 13:01:30	User ID: MORENC	Role: <input type="text" value="MANAGER"/>
Function: <input type="text"/>	Device Type: <input type="text"/>	Device Name: <input type="text"/>	
NSC: <input type="text" value="0"/>		window mgr	

Figure 5-56b IISS Function Screen

Press PF12 (UNSELECT AP).

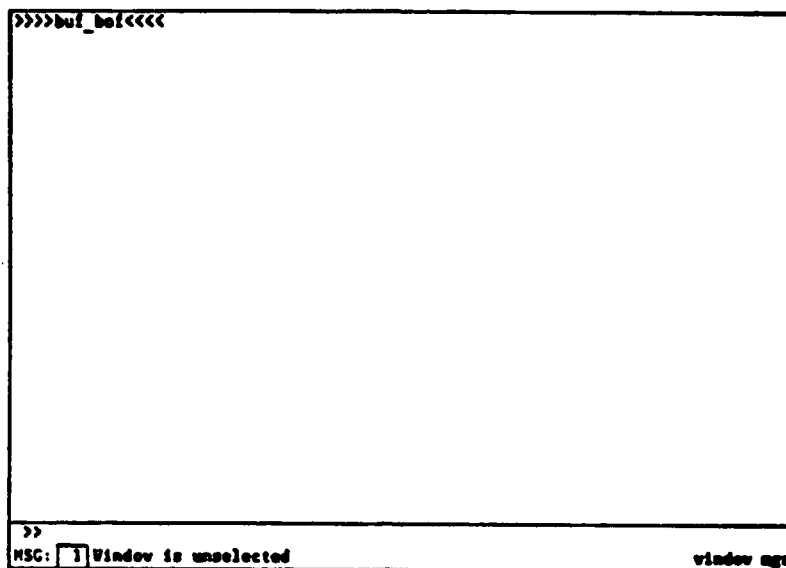


Figure 5-56c TE Screen

Press <Mode> Key to get into status mode and press PF6 to display Application Status Form.

Application Status										
Device				Window Name	Location		Display Size		Viewport Offset	
Application	Type	Name	Pri		Row	Col	W	D	Row	Col
SDTEZZZZZZ	VT100	TT:	1	SCREEN	1	1	80	23	0	0
SDTEZZZZZZ					1	1	80	23	0	0
SDMUZZZZZZ	VT100	TT:	2	SCREEN	1	1	80	23	0	0
SDMUZZZZZZ					1	1	79	16	0	0
SDARTESTZ	VT100	TT:	3	SCREEN	1	1	80	23	0	0
SDARTESTZ					1	1	79	69	0	0
SDARTESTZ				WV	3	45	0	0	0	0
SDARTESTZ				W3	3	60	10	8	0	0
SDARTESTZ				WV	3	45	0	0	0	0
SDARTESTZ				W3	3	60	10	8	0	0
WDRU	VT100	TT:	4		1	1	80	23	0	0

HSC: 0 status

Figure 5-56d Abort TE

Position cursor on 'VT100' in SDTEZZZZZZ line and press PF8 (ABORT)

Application Status										
Device				Window Name	Location		Display Size		Viewport Offset	
Application	Type	Name	Pri		Row	Col	V	D	Row	Col
SOTE222222	VT100	TT:	1	SCREEN	1	1	80	23	0	0
SOTE222222					1	1	80	23	0	0
SDW0222222	VT100	TT:	2	SCREEN	1	1	80	23	0	0
SDW0222222					1	1	79	16	0	0
SDAKTEST22	VT100	TT:	3	SCREEN	1	1	80	23	0	0
SDAKTEST22					1	1	79	69	0	0
SDAKTEST22				WV	3	45	0	0	0	0
SDAKTEST22				W3	3	60	10	8	0	0
SDAKTEST22				WV	3	45	0	0	0	0
SDAKTEST22				W3	3	60	10	8	0	0
WBAU	VT100	TT:	4		1	1	80	23	0	0

MSG: ☐ Application: SOTE222222 was signaled to abort status

Figure 5-56e Abort Result

Press <ENTER>

Application Status										
Device				Window Name	Location Row Col	Display Size		Viewport Offset		
Application	Type	Name	Pri			W	D	Row	Col	
SDW022222	VT100	TT:	1		1	1	80	23	0	0
SDW022222				SCREEN	1	1	79	16	0	0
SDARTE5T22	VT100	TT:	2		1	1	80	23	0	0
SDARTE5T22				SCREEN	1	1	79	16	0	0
SDARTE5T22				W7	3	45	0	0	0	0
SDARTE5T22				W3	3	60	10	8	0	0
SDARTE5T22				W7	3	45	0	0	0	0
SDARTE5T22				W3	3	60	10	8	0	0
MSDU	VT100	TT:	3		1	1	80	23	0	0

NSC: 0 status

Figure 5-57a Application Status Form after Aborting TE

Press <QUIT>.

Error Message Definition Screen

Message Base Number:

Number	MSG Name	Description
<input type="text"/>	<input type="text"/>	<input type="text"/>

MSG: 01 status

Figure 5-57b Abort MM

Press PF8 (ABORT) and wait for the screen to repaint.

Command Line		CLSDEV 26		form f11	
				Command L	
form f12		form f12	form f13	form f15	form f16
form f14		form f18			
form f14					
Line 21 Display: Closed logical device: 26					
Line 22					
Line 23					
MSG: 2 Application SDON222222 has terminated status					

Figure 5-58a Abort Result

Press <QUIT>.

IISS TEST BED VERSION 2.3

Date: 11/30/87 Time: 13:03:23 User ID: MORENC Role:

Function: Device Type: Device Name:

MSG: ☐ Application SDARTST22 has terminated status

Figure 5-58b IISS Function Screen

TEST TEST BED VERSION 1.3

Date: 12/ 4/87 Time: 9:26:02 User ID: NOBENC Role:

Function: Device Type: Device Name:

MSG: application

Figure 5-59a Restart ARTEST Application

Enter SDARTESTZZ in the Function field and press <ENTER>.

The diagram illustrates the 'First ARTEST Screen' layout. At the top, a 'Command Line' is shown. Below it, on the left, are two empty rectangular boxes. To the right of these is a large vertical rectangle labeled 'form f11'. Below the left boxes are several smaller forms: 'form f12' (two small boxes), 'form f13' (two small boxes), 'form f14' (two small boxes), and 'form f15' (a larger box with a vertical bar). To the right of these are 'form f16' (a small vertical bar) and 'form f17' (two small vertical bars). Below 'form f14' is another 'form f14' and a small horizontal bar. At the bottom left, the text 'Line 21 Display:' is followed by 'Line 22' and 'Line 23'. Below this is a status bar with 'MSG: 0' and the word 'application' on the right.

Figure 5-59b First ARTEST Screen

Press the <MODE> key to return to application mode.

Command Line		addrn v3 f112		form f11	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form f12		form f12		form f13	
<div></div>		<div></div>		<div></div>	
form f14		form f18		form f15	
<div></div>		<div></div>		<div></div>	
form f14				form f16	
<div></div>				<div></div>	
Line 21 Display:				form f17	
Line 22				<div></div>	
Line 23				<div></div>	
NSC: 0				application	

Figure 5-60a Prepare for TE Mode Testing

Command Line		addrn v3 ff12		form ff1	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form ff2		form ff2		form ff3	
<div></div>		<div></div>		<div></div>	
form ff4		form ff8		form ff5	
<div></div>		<div></div>		<div></div>	
form ff4				form ff6	
<div></div>				<div></div>	
Line 21 Display:				form ff7	
Line 22				<div></div>	
Line 23				<div></div>	
NSC: 0				application	

Figure 5-60b W3 with Form ff12

Command Line		pdata v3.f112.11 *1 line 2 line 3 line		form f11	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form f12		form f12	form f13	form f15	form f16
<div></div>		<div></div>	<div></div>	<div></div>	<div></div>
form f14		form f18			form f17
<div></div>		<div></div>			<div></div>
form f14					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-61a Enter Data in Item

Command Line		pdata v3.ff12.11 *1 line 2 line 3 line			form ff1	
					1 line 2 line 3 line	
form ff2		form ff2		form ff3		form ff5
form ff4		form ff6		form ff7		
form ff4						
Line 21 Display:						
Line 22						
Line 23						
MSG: 0		application				

Figure 5-61b Form ff12 Item with Data

Command Line		addfrm vl(1) ff13		form ff1	
				1 line 2 line 3 line	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4				form ff6	
form ff4				form ff7	
Line 21 Display:					
Line 22					
Line 23					
MSG: 0				application	

Figure 5-62a Add Form ff13 to W1

Command Line		addfrm vl(1) ff13		form ff1	
				1 line 2 line 3 line	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4				form ff6	
				form ff7	
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-62b W1 with Form ff13

Press the <MODE> key to get into Text Editor mode.

The diagram illustrates a Text Editor Mode interface. At the top, a 'Command Line' contains the text 'addira vl(1) ff13'. Below this, several forms are arranged: 'form ff1' is a vertical rectangle on the right containing '1 line', '2 line', and '3 line'; 'form ff2' is a small L-shaped form; 'form ff3' is a small horizontal rectangle; 'form ff5' is a small rectangle; 'form ff6' is a small vertical rectangle; 'form ff7' is a small vertical rectangle; 'form ff4' is a small horizontal rectangle; and 'form ff8' is a small horizontal rectangle. At the bottom left, there is a section labeled 'Line 21 Display:' followed by three dotted lines, and below that, 'Line 22' and 'Line 23' followed by dotted lines. At the bottom left corner, there is a label 'NSC:' followed by the number '0'. At the bottom right corner, there is a label 'application'.

Figure 5-62c Text Editor Mode

Position the cursor on the "n" in "1 line" and press PF13 (MIDLINE BREAK).

```

Command Line
addfrm vl(1) f113
form f11
1 li
no
2 line
3 line
form f12
form f12
form f13
form f15
form f16
form f17
form f14
form f18
form f14
Line 21 Display: .....
Line 22 .....
Line 23 .....
NSC: 0
text edit

```

Figure 5-63 Midline Break Result

Press PF10 (DELETE LINE).

Command Line		addrn vl(1) f113		form f11	
				1 11 2 line 3 line	
form f12		form f12		form f13	
form f14		form f15		form f16	
form f14		form f15		form f16	
Line 21 Display:		Line 22		Line 23	
MSG: 0				text edit	

Figure 5-64 Delete Line Result

Press PF9 (INSERT LINE).

Command Line		addira vl(1) ffl3		form ffl	
				1 11 2 line 3 line	
form ffl2		form ffl2		form ffl3	
form ffl4		form ffl4		form ffl5	
form ffl4		form ffl6		form ffl7	
Line 21 Display:		Line 22		Line 23	
MSG: 0				text edit	

Figure 5-65 Insert Line Result

Enter "line 1" in the blank line.

Command Line		addrn vl(1) f113		form f11	
				1 11 line 1 2 line 3 line	
form f12		form f12		form f13	
form f14		form f14		form f15	
form f14		form f14		form f16	
form f14		form f14		form f17	
Line 21 Display:		Line 22		Line 23	
MSG: 0				text edit	

Figure 5-66 New Data Entered

Press PF14 (DELETE ITEM).

Command Line		addirn vl(1) f113		form f11	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form f12		form f12	form f13	form f15	form f16
<div></div>		<div></div>	<div></div>	<div></div>	<div></div>
form f14		form f18			
<div></div>		<div></div>			
form f14					
<div></div>					
Line 21 Display:					
Line 22:					
Line 23:					
MSG: 0		text edit			

Figure 5-67 Delete Item Result

Press PF11 (PASTE).

Command Line		addirm vl(1) f113		form f11	
				1 11 line 1 2 line 3 line	
form f12		form f12		form f13	
form f14		form f14		form f15	
form f16		form f16		form f17	
Line 21 Display:		Line 22		Line 23	
MSG: 0				text edit	

Figure 5-68 Paste Result

Press PF14 (DELETE ITEM).

Command Line		addfrm vl(1) f113		form f11	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form f12		form f12		form f13	
<div></div>		<div></div>		<div></div>	
form f14		form f15		form f16	
<div></div>		<div></div>		<div></div>	
form f14		form f17		form f18	
<div></div>		<div></div>		<div></div>	
Line 21 Display:		Line 22		Line 23	
MSC: 0				test edit	

Figure 5-69 Delete Item Result

Press PF12 (FILL).

Command Line		addira vl(1) f113		form f11	
				1 11 line 1 2 line 3 line	
form f12		form f12		form f13	
form f14		form f16		form f17	
form f14		form f18			
form f14					
Line 21 Display:					
Line 22					
Line 23					
RSC: 0		text edit			

Figure 5-70 Fill Result

Position cursor below the "o" in Command and press PF12 (FILL).

Command Line		add(rn vl(1) ff13		form ff1	
1 11 line 1 2 line 3 line				1 11 line 1 2 line 3 line	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4				form ff6	
form ff4				form ff7	
Line 21 Display:					
Line 22					
Line 23					
RSC: 0				text edit	

Figure 5-71 Copying an Item Value Using Fill

Positon the cursor back in W3 and press PF15 (RESTORE).

Command Line		addfrm vl(1) ff13		form ff1	
1 11 line 1 2 line 3 line				1 line 2 line 3 line	
form ff2		form ff2		form ff3	
				form ff5	
form ff4		form ff8		form ff6	
				form ff7	
form ff4					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0				text edit	

Figure 5-72 Restore Result

Press PF5 (SEARCH).

The screenshot shows a search interface with a large central text area. At the top, there are two input fields: "Search String:" containing the text "line" and "Direction:" which is empty. At the bottom left, there is a label "MSG:" followed by a small box containing the number "0". At the bottom right, the text "text edit" is displayed.

Figure 5-73 Search Screen

Enter "line" and press <ENTER>.

Command Line		addrn w1(1) f113		form f11	
1 11				1 line	
2 line 1				2 line	
3 line				3 line	
form f12		form f12		form f13	
form f14		form f14		form f15	
form f14		form f14		form f16	
form f14		form f14		form f17	
Line 21 Display:					
Line 22					
Line 23					
MSG: 0				text edit	

Figure 5-74a Forwards Search Result

The cursor should be positioned on "line" after the "1" in w3.
Press PF6 (SEARCH NEXT).

Command Line		addrn vl(1) ff13		form ff1	
<div>1 li</div> <div>line 1</div> <div>2 line</div> <div>3 line</div>				<div>1 line</div> <div>2 line</div> <div>3 line</div>	
<div>form ff2</div> <div>form ff2</div> <div>form ff3</div> <div>form ff5</div> <div>form ff6</div> <div>form ff7</div>					
<div>form ff4</div> <div>form ff8</div> <div>form ff4</div>					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		text edit			

Figure 5-74b Search Next Result

The cursor should be positioned on "line" after the "2" in w3.
Press PF6 (SEARCH NEXT).

Command Line		addirm w1(1) ff13		form ff1	
1 11 line 1 2 line 3 line				1 line 2 line 3 line	
<div></div>				<div></div>	
form ff2		form ff2		form ff3	
<div></div>		<div></div>		<div></div>	
form ff4		form ff8		form ff5	
<div></div>		<div></div>		<div></div>	
form ff4				form ff6	
<div></div>				<div></div>	
form ff4				form ff7	
<div></div>				<div></div>	
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		text edit			

Figure 5-74c Search Next Result

The cursor should be positioned on "line" after the "3" in w3.
Press PF6 (SEARCH NEXT).

Command Line		addfrm vl(1) f113		form f11	
1 11 line 1 2 line 3 line				1 line 2 line 3 line	
form f12		form f12		form f13	
form f14		form f14		form f15	
form f16		form f16		form f17	
Line 21 Display:		Line 22		Line 23	
MSG: 1 String not found				text edit	

Figure 5-74d String Not Found

Press PF5 (SEARCH).

The screenshot shows a rectangular window with a black border. At the top left, the text "Search String:" is followed by a text box containing the word "line". At the top right, the text "Direction:" is followed by a small box containing a hyphen "-" and a cursor. The main area of the window is empty. In the bottom left corner, the text "MSG:" is followed by a small box containing the number "0". In the bottom right corner, the text "text edit" is displayed.

Figure 5-75 Search Screen

Enter "line" and "-" for direction and press <ENTER>.

Command Line		addrn w1(1) ff13		form ff1	
1 11				1 line	
line 1				2 line	
2 line				3 line	
3 line					
form ff2		form ff2		form ff3	
form ff4		form ff4		form ff5	
form ff4		form ff4		form ff6	
form ff4		form ff4		form ff7	
Line 21 Display:		Line 22		Line 23	
MSG: 0				text edit	

Figure 5-76a Backwards Search Result

The cursor should be positioned on "line" after the "2" in w3.
Press PF6 (SEARCH NEXT).

Command Line		add/rm vl(1) ff13		form ff1	
1 11 line 1 2 line 3 line				1 line 2 line 3 line	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4				form ff6	
Line 21 Display:				form ff7	
Line 22					
Line 23					
MSG: 0				text edit	

Figure 5-76b Search Next Result

The cursor should be positioned on "line" after the "1" in w3.
Press PF6 (SEARCH NEXT).

Command Line		addira vl(1) ff13		form ff1	
1 ff				1 line	
line 1				2 line	
2 line				3 line	
3 line					
form ff2		form ff2		form ff3	
				form ff5	
				form ff6	
				form ff7	
form ff4		form ff8			
form ff4					
Line 21 Display:					
Line 22					
Line 23					
MSG: 1 String not found		text edit			

Figure 5-76c String Not Found

Press PF5 (SEARCH).

The screenshot shows a terminal window with a search interface. At the top, there are two labels: "Search String:" followed by a text box containing the word "line", and "Direction:" followed by a dropdown menu showing a plus sign. The main area of the window is empty. At the bottom left, there is a label "MSG:" followed by a small box containing the number "0". At the bottom right, the text "text edit" is displayed.

Figure 5-77 Search Screen

Enter "line" and "+" for direction and press <ENTER>.

Command Line		add:ra w3(1) ff13		form ff1	
1 li				1 line	
line 1				2 line	
2 line				3 line	
3 line					
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4				form ff6	
				form ff7	
Line 21 Display:					
Line 22					
Line 23					
NSC: 0		tent edit			

Figure 5-78 Search Result

The cursor should be positioned on "line" after the "2" in w3.
Press PF7 (REPLACE).

The image shows a graphical user interface window titled "Replace". The window has a title bar with two fields: "Replacement String:" containing the text "LINE" and "Direction:" with a dropdown arrow. The main body of the window is a large, empty rectangular area. At the bottom left corner, there is a small box labeled "MSG:" followed by the number "0". At the bottom right corner, the text "text edit" is displayed.

Figure 5-79 Replace Screen

Enter "LINE" and press <ENTER>.

Command Line		addfrn w1(1) f13		form f11	
1 11				1 line	
line 1				2 LINE	
2 line				3 line	
3 line					
form f12		form f12		form f13	
form f14		form f18			
form f14					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		text edit			

Figure 5-80 Replacement Result

Press PF8 (REPLACE NEXT).

Command Line		addfrm v1(1) f113		form f11	
1 li line 1 2 line 3 line				1 line 2 LINE 3 LINE	
form f12		form f12		form f13	
form f14		form f14		form f15	
form f16		form f16		form f17	
form f18		form f18			
form f19		form f19			
Line 21 Display:		Line 22		Line 23	
MSG: 0				text edit	

Figure 5-81 Replace Next Result

Press PF17 (MARGINS).

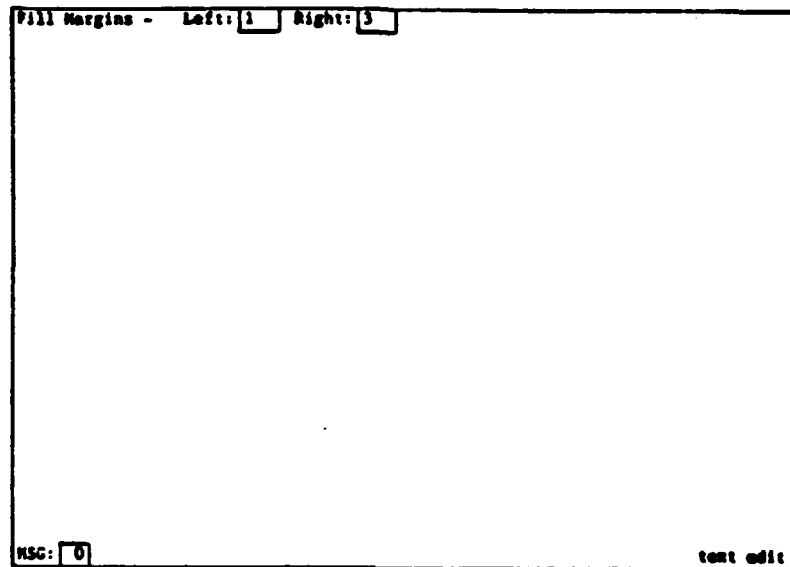


Figure 5-82 Fill Margins Screen

Enter "1" for left and "3" for right and press <ENTER>.

Command Line		addfrm w1(1) f113		form f11	
1 11 line 1 2 line 3 line				1 line 2 LINE 3 LINE	
form f12		form f12	form f13	form f15	form f16
form f14		form f18			
form f14					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		text edit			

Figure 5-83 Test New Fill Margins

Position the curson on the "1" in w3 and press PF12 (FILL).

Command Line		addrn w1(1) f113		form f11	
1 11 line 1 2 line 3 line				1 line 2 LINE 3 LINE	
form f12		form f12	form f13	form f13	form f16
form f14		form f18			
form f14					
Line 21 Display:					
Line 22					
Line 23					
WSC: 0		text edit			

Figure 5-84 Fill Result

Press PF17 (MARGINS).

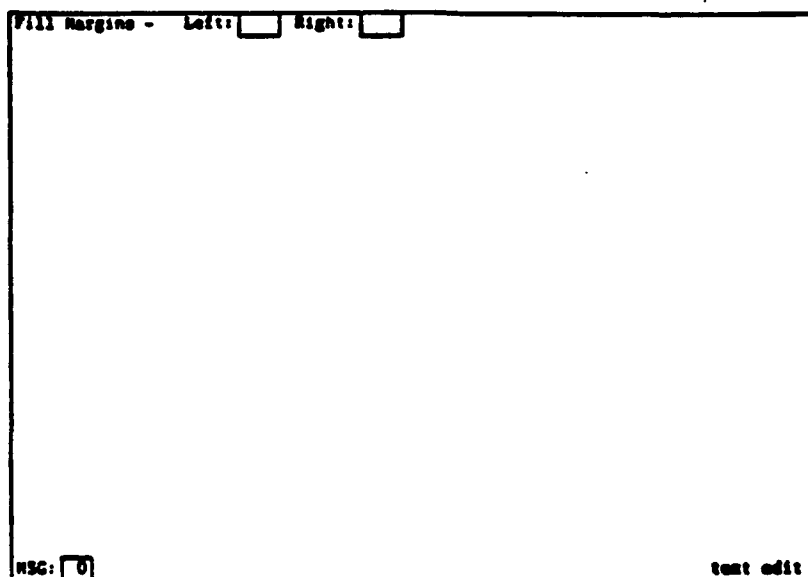


Figure 5-85 Fill Margins Screen

Press <ENTER>.

Command Line		addira vl(1) f13		form f11	
1 11 line 1 2 line 3 line				1 11 11a a 1 2	
form f12		form f12		form f13	
form f14		form f15		form f16	
form f14		form f15		form f17	
Line 21 Display:		Line 22		Line 23	
NSC: 0				text edit	

Figure 5-86 Test Changed Fill Margins

Press PF12 (FILL) .

Command Line		addirc vl(1) f13		form f11	
1 li	line 1	2 line	3 line	1 li	line 1
				2	
form f12		form f12		form f13	
form f14		form f14		form f15	
form f14		form f14		form f16	
form f14		form f14		form f17	
Line 21 Display:					
Line 22					
Line 23					
MSG: 0				text edit	

Figure 5-86 Test Changed Fill Margins

Press PF12 (FILL).

Command Lineaddfrm vl(1) ffl3

form ffl

1 11
line 1
2 line
3 line

1 11
line 1 2
line 3
line
1

form ff2

form ff2

form ff3

form ff5

form ff6

form ff7

form ff4

form ff8

form ff4

Line 21 Display:
Line 22
Line 23

MSG: 0text edit

Figure 5-87 Fill Result

Press PF15 (RESTORE).

Command Line		addfrm vl(1) ff13		form ff1	
1 li line 1 2 line 3 line				1 line 2 line 3 line	
form ff2		form ff2		form ff3	
form ff4		form ff5		form ff6	
form ff7		form ff8		form ff9	
Line 21 Display:		Line 22		Line 23	
NSC: 0				text edit	

Figure 5-88 Restore Result

Press PF5 (SEARCH).

Search String: line Direction: ☐

NSC: ☐ 0 text edit

Figure 5-89 Search Screen

Enter "line" and press <ENTER>.

Command Line		addrn w1(1) f113		form f11	
1 11	line 1	2 line	3 line	1 line	2 line
				3 line	
form f12		form f12		form f13	
form f14		form f14		form f15	
form f16		form f16		form f17	
Line 21 Display:		Line 22		Line 23	
NSC: 0				text edit	

Figure 5-90 Search Result

The cursor should be positioned on "line" after the "1" in w3.
Press PF16 (REPEAT).

The image shows a rectangular window representing a 'Repeat Screen'. At the top left, the text 'Repeat Count:' is followed by a small box containing the number '3'. At the bottom left, the text 'WSC:' is followed by a small box containing the number '0'. At the bottom right, the text 'text edit' is displayed. The rest of the window is empty.

Figure 5-91 Repeat Screen

Enter "3" and press <ENTER>.

Command Line		addfrc vl(1) ff13		form ff1	
1 11 line 1 2 line 3 line				1 line 2 line 3 line	
<div></div>				<div></div>	
form ff2		form ff2		form ff3	
<div></div>		<div></div>		<div></div>	
form ff4		form ff5		form ff6	
<div></div>		<div></div>		<div></div>	
form ff4		form ff6		form ff7	
<div></div>		<div></div>		<div></div>	
form ff4					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
NSC: 0		text edit			

Figure 5-92 Test Repeat Replace

Press PF7 (REPLACE).

Command Line		addfrm vl(1) ff13		form ff1	
1 11	line 1	2 11	line 2	3 11	line 3
form ff2		form ff2		form ff3	
form ff4		form ff4		form ff5	
form ff4		form ff4		form ff6	
form ff4		form ff4		form ff7	
Line 21 Display:		.....		.....
Line 22		.....		.....
Line 23		.....		.....
ASC: 0				cont edit	

Figure 5-94 Repeat Replace Result

Press <QUIT>.

IISS TEST BED VERSION 2.3			
Date: 12/ 4/87	Time: 9:28:55	User ID: NORDIC	Role: <input type="text" value="MANAGER"/>
P. :tion: <input type="text"/>	Device Type: <input type="text"/>	Device Name: <input type="text"/>	
NSG: <input type="checkbox"/> Application SDARTESTZZ has terminated			
text edit			

Figure 5-95 IISS Function Screen

```

MISS TEST BED VERSION 2.3
-----
Date: 11/16/87      Time: 9:38:05      User ID: SYNGER      Role: SYNGER
Function: artest      Device Type:      Device Name:

```

Figure 5-96a Restart ARTEST Application

Enter "ARTEST" as shown and press <ENTER>.

Command Line		form f11			
<div></div>		<div></div>			
<div></div>		<div></div>			
form f12	form f12	form f13	form f15	form f16	form f17
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form f14	form f16				
<div></div>	<div></div>				
form f14					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-96b First ARTEST Screen

Command Line		addfld ff4 i2 1 input 1 1 ; 1 1 1 ; 1 1		form ff1	
		6			
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4				form ff6	
form ff4				form ff7	
Line 21 Display:					
Line 22					
Line 23					
NSC: 0				application	

Figure 5-97a ADDFLD Test Case 1

Create a new input item field named i2 of size 1 by 1 and add it to the form ff4. The fields position is offset 1 row and 2 columns from the upper left corner of the containing forms.

Command Line addffid ff4 i2 i input 1 1 ; 1 1 1 ; 1 1 form ff1
6

form ff1
form ff2
form ff3
form ff4
form ff5
form ff6
form ff7
form ff8
form ff9
form ff10

Line 21 Display:
Line 22
Line 23
MSG: 0 application

Figure 5-97b Case 1 Result

Since the form ff4 is a repeating form field, the field i2 is added to both instances of the form.

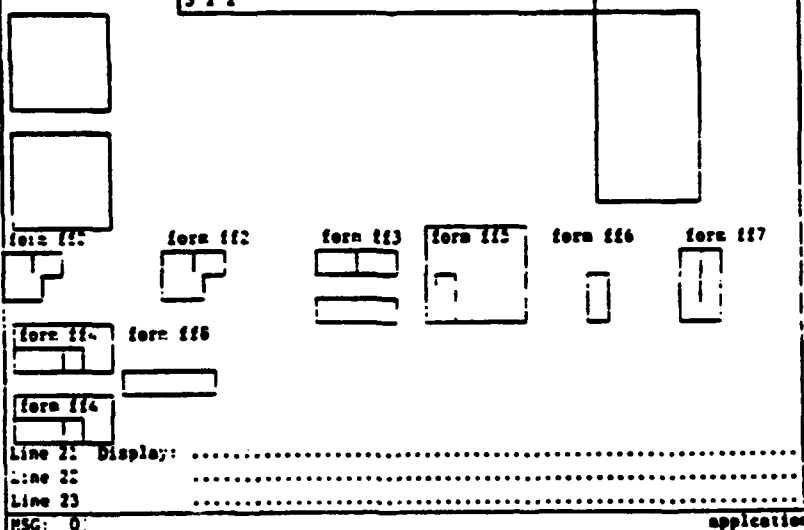
Command Line	addfld ff4 i3 1 input 1 1 i2; 1 1 0 i2; 3 1 2					form ff1
 <p>The diagram shows a form layout with several fields and labels. At the top left, there are two empty rectangular boxes. Below them are labels 'form ff5', 'form ff2', 'form ff3', 'form ff5', 'form ff6', and 'form ff7'. Each label is followed by a small rectangular box representing a field. 'form ff5' has a small '1' in its top-left corner. 'form ff3' has a small '1' in its top-left corner. 'form ff5' has a small '1' in its top-left corner. 'form ff6' has a small '1' in its top-left corner. 'form ff7' has a small '1' in its top-left corner. Below these are labels 'form ff4', 'form ff6', and 'form ff4'. Each label is followed by a small rectangular box representing a field. 'form ff4' has a small '1' in its top-left corner. 'form ff6' has a small '1' in its top-left corner. 'form ff4' has a small '1' in its top-left corner. At the bottom, there are labels 'Line 21: Display:', 'Line 22:', 'Line 23:', and 'MSG: 0'. To the right of these labels are dotted lines. At the bottom right, there is a label 'application'.</p>						
Line 21: Display: Line 22: Line 23: MSG: 0 application						

Figure 5-98a ADDFLD Test Case 2

Create a new input item field named i3 of size 1 by 1 and add it to the form ff4. The field is positioned relative to i2.

Command Line		addfld f14 i3 1 input 1 1 i2; 1 1 0 i2; 3 1 2		form f11	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form f12	form f12	form f13	form f15	form f16	form f17
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form f18	form f18				
<div></div>	<div></div>				
form f14					
<div></div>					
Line 21 Display:	.....			
Line 22	.....			
Line 23	.....			
RSC: C		application			

Figure 5-98b Case 2 Result

The field i3 appears to the right of i2 as specified.

Command Line ctrlfd ff5 ff5_i2 form ff1

form ff2 form ff3 form ff5 form ff6 form ff7

form ff4

Line 21 Display:
Line 22
Line 23
MSG: 0 application

Figure 5-99a CRTFLD Test Case

Create a field named ff5_i2 on the form ff5. Define no other properties of the field at this time. There are no changes in the terminal screen at this time.

Command Line		setloc ff5 ff5_i2 ; 1 1 2 ; 1 1 3		form ff1	
<div style="border: 1px solid black; width: 60px; height: 40px; margin-bottom: 5px;"></div> <div style="border: 1px solid black; width: 60px; height: 40px;"></div>		<div style="border: 1px solid black; width: 60px; height: 80px; margin-left: 10px;"></div>			
form ff5		form ff2		form ff3	
<div style="border: 1px solid black; width: 30px; height: 20px;"></div>		<div style="border: 1px solid black; width: 30px; height: 20px;"></div>		<div style="border: 1px solid black; width: 30px; height: 20px;"></div>	
form ff4		form ff6		form ff7	
<div style="border: 1px solid black; width: 30px; height: 20px;"></div>		<div style="border: 1px solid black; width: 30px; height: 20px;"></div>		<div style="border: 1px solid black; width: 30px; height: 20px;"></div>	
form ff8		form ff9			
<div style="border: 1px solid black; width: 30px; height: 20px;"></div>		<div style="border: 1px solid black; width: 30px; height: 20px;"></div>			
form ff10		form ff11			
<div style="border: 1px solid black; width: 30px; height: 20px;"></div>		<div style="border: 1px solid black; width: 30px; height: 20px;"></div>			
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-99b Specify Field Location

Use SETLOC to define the location of ff5_i2 to be offset 2 rows and 3 columns from the upper left corner of the containing form.

Command Line		setdis ff5 ff5_i2 input		form ff1	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form ff2	form ff2	form ff3	form ff5	form ff6	form ff7
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form ff4	form ff8				
<div></div>	<div></div>				
form ff4					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
NSC: 0		application			

Figure 5-99c Specify Field Display Attribute

Use SETDIS to define the display attribute of the field ff5_i2 to be input.

Command Line		setdis ff5 ff5_12 input		form ff1	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form ff2		form ff2		form ff3	
<div></div>		<div></div>		<div></div>	
form ff4		form ff5		form ff6	
<div></div>		<div></div>		<div></div>	
form ff4		form ff6		form ff7	
<div></div>		<div></div>		<div></div>	
Line 21 Display:		Line 22		Line 23	
NSC: 0				application	

Figure 5-99d Test Case Result

The field is now visible on form ff5.

Command Line repfld ff8 i1 ff5 i2 form ff1

form ff1

form ff2 form ff3 form ff4 form ff5 form ff6 form ff7

form ff8

form ff8

Line 21 Display:
Line 22:
Line 23:

MSG: 0 application

Figure 5-100a REPFLD Test Case

Create a copy of the item field i1 on form ff8. Name the field i2 and attach it to form ff5 without giving it a location. There will be no changes on the terminal screen at this time.

The screenshot shows a terminal window with a command line at the top. The command line contains the text "setloc ff5 i2 : 1 1 1 ; 1 1 1" and "form ff1". Below the command line, there is a graphical user interface with several forms. The forms are labeled "form ff1", "form ff2", "form ff3", "form ff4", "form ff5", "form ff6", "form ff7", "form ff8", and "form ff9". The forms are arranged in a grid-like fashion. The "form ff5" is a large form in the center. The "form ff1" is a large form on the right. The "form ff2" is a small form on the left. The "form ff3" is a small form in the center. The "form ff4" is a small form on the left. The "form ff6" is a small form on the right. The "form ff7" is a small form on the right. The "form ff8" is a small form on the left. The "form ff9" is a small form on the left. At the bottom of the terminal window, there is a status bar with the text "Line 21 Display: ", "Line 22 ", "Line 23 ", "MSG: 0.", and "application".

Figure 5-100b Specify an Absolute Field Location

Use SETLOC to position the field i2 on form ff5 1 row and 1 column from the upper left corner of ff5.

Command Line		setloc ff5 12 ; 1 1 1 ; 1 1 1		form ff1	
<div></div>		<div></div>		<div></div>	
<div></div>		<div></div>		<div></div>	
form ff4	form ff2	form ff3	form ff5	form ff6	form ff7
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form ff10	form ff8				
<div></div>	<div></div>				
form ff4					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0;		application			

Figure 5-100c Test Case Result

The field is now visible on form ff5.

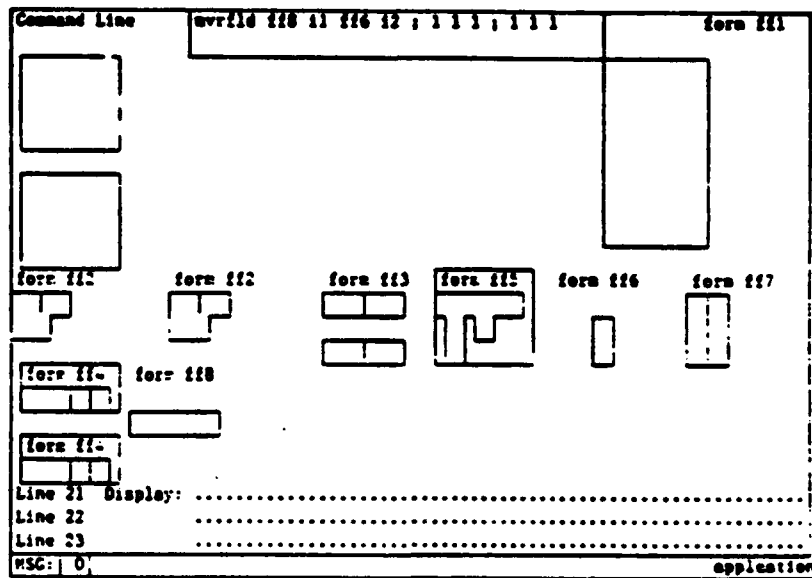


Figure 5-101a MVRFLD Test Case

Copy a field and define the position to be offset 1 row and 1 column from the origin of form ff6.

Command Line

overfld ff8 i1 ff6 i2 : 1 1 1 ; 1 1 1

form ff1

form ff2

form ff3

form ff4

form ff5

form ff6

form ff7

form ff4

form ff6

Line 21 Display:
Line 22
Line 23

NSC: 0 application

Figure 5-101b Test Case Result

The original field is i1 on form ff8. The copy is named i2 and now appears on the form ff6.

Command Line: rmvfld ff6 i2

form ff1

form ff2

form ff3

form ff4

form ff5

form ff6

form ff7

Line 21 Display:
Line 22
Line 23
NSC: 0 appears!

Figure 5-102 RMVFLD Test Case with Result

Remove field i2 from form ff6. The form ff6 appears as it did before calling MVRFLD.

Command Line reptra ff4 ff42 form ff1

form ff1 form ff2 form ff3 form ff5 form ff6 form ff7

form ff1 form ff2

form ff4

Line 21 Display:
Line 22
Line 23
NSC: 0 application

Figure 5-103a REPFRM Test Case

Create a copy of the form ff4 and call it ff42. There will be no changes on the terminal screen at this time.

Command Line addform w3 ff42 form ff1

form ff2 form ff3 form ff4 form ff5 form ff6 form ff7

form ff4 form ff4

Line 21 Display:
Line 22
Line 23
NSC: 0 application

Figure 5-103b Test Case Result

The form is added to the window W3 so that it becomes visible and you can see that the form copy was actually created. Note that only a single instance of ff4 appears.

Command Line crtfrm ff54 form ff1

form ff1

form ff2 form ff3 form ff4 form ff5 form ff6 form ff7

form ff4 form ff8

form ff4

Line 21 Display:
Line 22
Line 23

MSG: 0 application

Figure 5-104a CRTFRM Test Case

Create a form named ff54. There will be no changes on the terminal screen at this time.

Command Line addfld ff54 i1 i input 3 1 ; 1 1 0 ; 1 1 form ff1
1

form ff1
form ff2
form ff3
form ff4
form ff5
form ff6
form ff7

form ff1
form ff2
form ff3
form ff4
form ff5
form ff6
form ff7

Line 21 Display:
Line 22
Line 23
MSC: 0 application

Figure 5-104b Add a Field to the Form

Use ADDFLD to add an input item field, i1, to the form ff54. Its position is offset 0 rows and 1 column from the origin of ff54. There will be no changes on the terminal screen at this time.

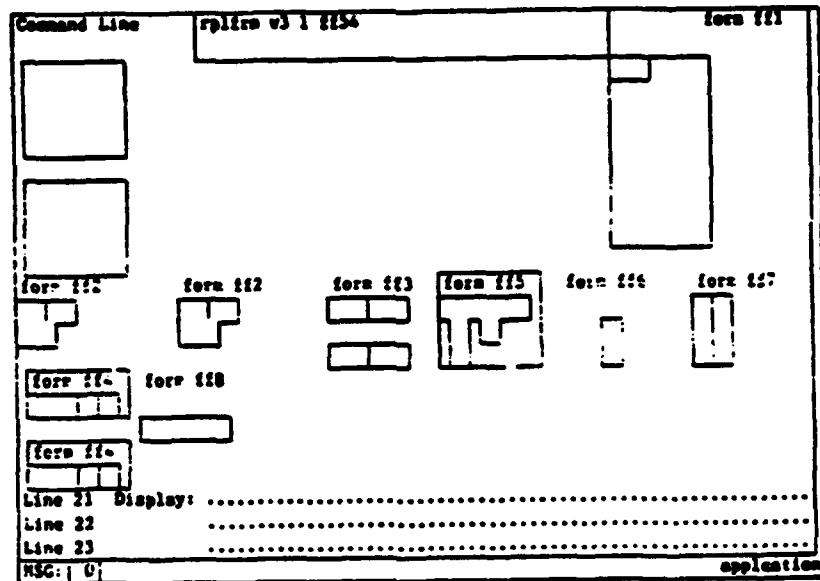


Figure 5-104c Test Case Result

The form is added to the window W3 so that it becomes visible and you can see that it was actually created.

The screenshot shows a terminal window with a 'Command Line' at the top containing the text 'makfra ff59 black 2 2'. Below the command line, there are several icons representing different forms, labeled 'form ff1' through 'form ff8'. The forms are arranged in a grid-like fashion. At the bottom of the window, there is a section labeled 'Line 21 Display:' followed by three lines of text: 'Line 22', 'Line 23', and 'Line 24'. The bottom right corner of the window is labeled 'application'.

Figure 5-105a MAKFRM Test Case

Create a form named ff59 with a black background and a size of 2 by 2.

The screenshot displays a graphical user interface for a test case. At the top, a 'Command Line' box contains the text: 'addfld ff5 ff59 2 black 2 2 ; 1 1 2 ; 1' followed by 'form ff1' and '1 6'. Below this, a large rectangular area represents the form layout. It contains several smaller rectangular boxes representing form fields, labeled 'form ff2', 'form ff3', 'form ff4', 'form ff5', 'form ff6', and 'form ff7'. 'form ff5' is the largest and contains a complex internal structure. Below the main form area, there are three lines of text: 'Line 21 Display:', 'Line 22', and 'Line 23'. At the bottom left, a box labeled 'MSG:' contains the number '0'. At the bottom right, the word 'application' is visible.

Figure 5-105b Test Case Result

The form ff59 is added as a form field to the form ff5 with a position offset 2 rows and 8 columns from the origin of ff5 to show that it was actually created.

The screenshot displays a graphical user interface for GDPFEX Test Preparation. At the top, a 'Command Line' box contains the text 'rplfrm w3 1 ff14'. To the right of the command line is a large rectangular area labeled 'form ff1'. Below the command line, there are several smaller icons representing different forms: 'form ff2', 'form ff3', 'form ff4', 'form ff5', 'form ff6', and 'form ff7'. These icons are arranged in a grid-like fashion. At the bottom of the interface, there is a section labeled 'Line 31 Display:' followed by three lines of text: 'Line 22', 'Line 23', and 'Line 24'. The bottom right corner of the interface is labeled 'application'.

Figure 5-106a GDPFEX Test Preparation

Use RPLFRM to replace the current form in page 1 of w3 with form ff14.

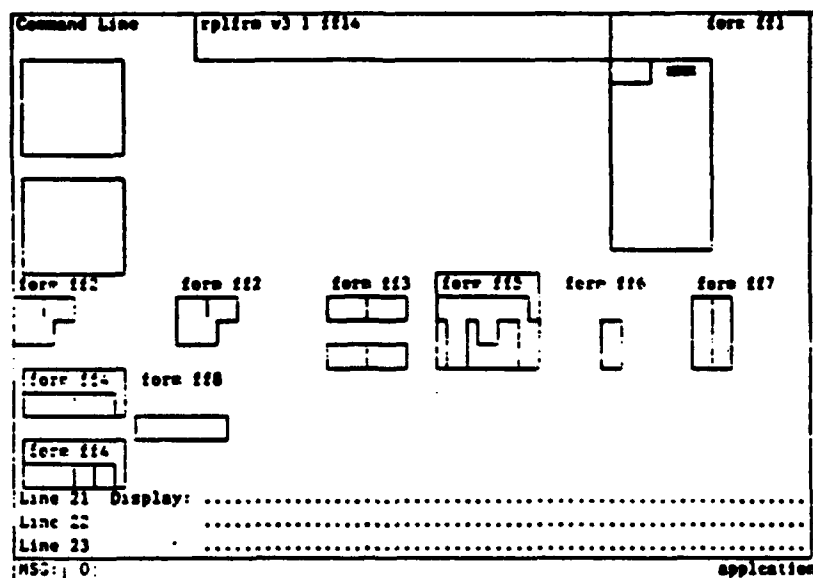


Figure 5-106b RPLFRM Result

Command Line		pdate ff14.i1 = 17		form ff1	
<div></div>		<div></div>		<div></div>	
form ff5		form ff2	form ff3	form ff4	form ff6
<div></div>		<div></div>	<div></div>	<div></div>	<div></div>
form ff7		form ff8			
<div></div>		<div></div>			
form ff9					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
MS: 0		application			

Figure 5-106c Set Value of Item i1

Use PDATA to set the value of the item field i1 on ff14 to "17".

Command Line		pdata f114.11 * 17°		form f11	
				17 mm 17	
form f12		form f13		form f14	
form f15		form f16		form f17	
form f18		form f19			
form f20		form f21			
Line 21 Display:		Line 22		Line 23	
MSG: 01				application	

Figure 5-106d PDATA Result

Command Line		gdpfex ff14 i1 1		form ff1	
				17 17	
form ff2		form ff3		form ff5	
form ff4		form ff8		form ff6	
form ff4				form ff7	
Line 21 Display: 12					
Line 22					
Line 23					
MSG: 0				application	

Figure 5-107a GDPFEX Test Case 1 with Result

Get the first field in the form ff14 which has a VALUE clause referring to the item field i1. It is i2.

Command Line		gdpfex ff14 il 0		form ff1	
				<div>17</div> <div>17</div>	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4				form ff6	
				form ff7	
Line 21 Display: 12		.....		
Line 22		.....		
Line 23		.....		
MSG: 1		No dependent value clause found		application	

Figure 5-107b GDPFEX Test Case 2 with Result

Get the second field in the form ff14 which has a VALUE clause referring to the item field il. There is no such field. The form ff14 only contains one field that has a value clause expression referring to item il.

Command Line		gdpdex if14 il 0		form if1	
				17 min 17	
form if2		form if2		form if3	
form if4		form if8		form if5	
form if4				form if6	
form if4				form if7	
Line 21 Display: I2					
Line 22					
Line 23					
MSG: 1 No dependant value clause found					
application					

Figure 5-107c GDPFEX Test Case 3 with Result

Get the last field in the list of fields whose value depends on the item field il. Since there is only one such field, i2, this field name is returned.

The screenshot displays the IBM DB/2 graphical user interface. At the top, a 'Command Line' window shows the command 'getpic fff4 11 1'. Below this, a large rectangular area represents the data grid, which is currently empty. To the right of the command line, a small window shows the value '17'. Below the main data grid, there are several smaller windows labeled 'form fff', 'form fff', 'form fff', 'form fff', 'form fff', and 'form fff'. These windows contain various graphical elements, including lines, boxes, and text. At the bottom of the screen, a status bar displays the message 'MSG: 1 No dependent value clause found' and the word 'application'.

Figure 5-108 GDPFLC Test Case with Result

Get the first field in the form ff14 which has a location clause referring to the item field i1. The first such field is i3. The location of i3 is relative to i1.

Command Line		gfield ff3 1		form ff1	
				<div>17</div> <div>17</div>	
form ff2		form ff2		form ff3	
form ff2		form ff3		form ff5	
form ff2		form ff6		form ff7	
form ff2		form ff6			
form ff4					
Line 21 Display: name = 11 type = 1					
Line 22					
Line 23					
MSG: 1		No dependent value clause found			application

Figure 5-109a GFMFLD Test Case 1 with Result

Get the first field belonging to the form ff3. The name of this field is il, and it is an item field.

Command Line		gfmfld ff3 2		form ff1	
				37 min 37	
form ff2		form ff2		form ff3	
form ff4		form ff6		form ff5	
form ff4				form ff6	
form ff4				form ff7	
Line 21 Display:					
Line 22					
Line 23					
MSG: 2 End of field list				application	

Figure 5-109b GFMFLD Test Case 2 with Result

Get the second field belonging to the form ff3. There is only one field in ff3 as the message shows.

Command Line		gfofld ff1 9		form ff1	
				<div>17 max 17</div>	
form ff2		form ff2	form ff3	form ff5	form ff6
form ff4		form ff8			
form ff4					
Line 21 Display: name = FF3 type = F					
Line 22					
Line 23					
MSG: 2		End of field list		application	

Figure 5-109c GFMFLD Test Case 3 with Result

Get the ninth field belonging to the form ff1. The name of this field is ff3, and it is a form field.

Command Line		gfmfld ff1 -1		form ff1	
				<div>17</div> <div>17</div>	
form ff2		form ff2		form ff3	
form ff4		form ff5		form ff6	
form ff4		form ff8		form ff7	
Line 21		Display: name = FF8		type = F	
Line 22				.....
Line 23				.....
MSG: 2		End of field list		application	

Figure 5-109d GFMFLD Test Case 4 with Result

Get the next to the last field belonging to the form ff1. The name of this field is ff8, and it is a form field.

The screenshot displays a graphical user interface for a GFMFLD Test Case 5. At the top, a 'Command Line' box contains the text 'gfmfld ff1 -12'. To its right, a box labeled 'form ff1' contains a small table with two rows: the first row has '1/1' and 'max', and the second row has '1' and an empty cell. Below the command line, there are several other form fields: 'form ff2' (two empty boxes), 'form ff3' (two empty boxes), 'form ff5' (a complex shape), 'form ff6' (a single box), and 'form ff7' (a single box). Further down, 'form ff4' appears twice, each consisting of three small boxes. At the bottom, a status bar shows 'Line 21 Display: name = i4 type = 1', 'Line 22', and 'Line 23'. The bottom-most bar indicates 'MSG: 2 End of field list' and 'application'.

Figure 5-109e GFMFLD Test Case 5 with Result

Get the field belonging to the form ff1 which is twelfth from the last. The name of this field is i4, and it is an item field.

Command Line		adddim ff8 i1 2 2 v 0		form ff1	
				<div>17 max</div> <div>17</div>	
form ff2		form ff3		form ff5	
form ff4		form ff8		form ff6	
form ff4				form ff7	
Line 21 Display: Line 22 Line 23 MSG: 2 End of field list application					

Figure 5-110a ADDDIM Test Case

Add a repeat specification to the item field i1 in the form ff8 which indicates that i1 repeats vertically twice with no spaces and that both instances are actually displayed.

Command Line		addin ff8 i1 2 2 v 0		form ff1	
				<div>17</div> <div>17</div>	
form ff2		form ff2		form ff3	
				form ff5	
form ff4		form ff8		form ff6	
				form ff7	
form ff1					
form ff4					
Line 21 Display:					
Line 22					
Line 23					
HSC: 2		End of field list		application	

Figure 5-110b Test Case Result

The box below the "form ff8" shows the result of making i1 an array.

Command Line		setdom ff8 i1 "right,numeric,maximum 20, minimum 10"		form ff1	
				<div>1/1</div> <div>1,</div>	
form ff5		form ff2		form ff3	
form ff4		form ff6		form ff5	
form ff4				form ff6	
form ff4				form ff7	
Line 21 Display:					
Line 22					
Line 23					
MSG: 2 End of field list				application	

Figure 5-111a SETDOM Test Case 1

Establish a domain clause for the repeating item field i1 on the form ff8. Define i1 to be a must enter, right justified, numeric field with a minimum value of 10 and a maximum value of 20.

Command Line		setdec ff8 i1 *right,numeric,maximum 20, minimum 10"		form ff1	
				17 17	
form ff2		form ff2		form ff3	
				form ff5	
				form ff6	
				form ff7	
form ff4		form ff8			
		abc			
form ff4					
Line 21 Display:					
Line 22					
Line 23					
MSG: 2 End of field list				application	

Figure 5-111b Test Verification

A data value of "abc" is entered in the item field i1 on form ff8.

Command Line	setdom f18 f1 "right,numeric,maximum 20, minimum 10"		form f11		
			17	mm	
			17		
form f11	form f12	form f13	form f15	form f16	form f17
1	1				
form f14	form f16				
	abc				
form f14					
Line 21 Display:					
Line 22					
Line 23					
MSG: 3 Field must contain only integer numbers application					

Figure 5-111c Domain Check Result

The value is right justified but since "abc" is not numeric, an error message is issued.

Command Line		setdom ff8 11 "right,numeric,maximum 20, minimum 10"		form ff1	
<div></div>		<div></div>		<div>17</div> <div>17</div>	
form ff2		form ff2		form ff3	
<div></div>		<div></div>		<div></div>	
form ff4		form ff8		form ff5	
<div></div>		<div>21</div>		<div></div>	
form ff4				form ff6	
<div></div>				<div></div>	
form ff7				<div></div>	
<div></div>				<div></div>	
Line 21 Display:					
Line 22					
Line 23					
MSG: 3		Field value is out of range			
application					

Figure 5-111d Invalid Value with Result

Entering an out of range numeric value results in an error message in the message line.

Command Line

setdel ffb il *right,numeric,maximum 20,
minimum 10

form ff1

17

form ff2

form ff3

form ff4

form ff5

form ff6

form ff7

Line 21 Display:

Line 22

Line 23

MSG: 0

application

Figure 5-111e Valid Value with Result

The value "11" satisfies all of the domain constraints and is accepted as a valid value.

Command Line		rmvdim ff8 i1 1		form ff1	
				<div>11</div> <div>1</div> <div>max</div>	
form ff7		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4		11		form ff6	
Line 21 Display:		Line 22		Line 23	
MSG: 0				application	

Figure 5-112a RMVDIM Test Case

Remove the array dimension from item field i1 on form ff8.

Command Line		rwdia ff8 il 1		form ff1	
				17 17	
form ff2		form ff2		form ff3	
form ff4		form ff5		form ff6	
form ff4		form ff6		form ff7	
Line 21 Display:		Line 22		Line 23	
NSC: 0				application	

Figure 5-112b Test Case Result

The form ff8 now only contains one occurrence of the item field il.

Command Line		setdom ff8 i1 "left,must enter,character .upper"		form ff1	
<div></div>				<div>17 17</div>	
<div></div>					
form ff1	form ff2	form ff3	form ff5	form ff6	form ff7
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form ff4	form ff6				
<div></div>	<div>11</div>				
form ff4					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-113a SETDOM Test Case 2

Redefine the item field i1 on the form ff8 to be a required entry character field that is to be left justified and shifted to upper case.

Command Line		setdom f18 i1 *left,must enter,character ,upper"		form f11	
				17 mm	
				17	
form f12		form f12		form f13	
form f14		form f18		form f15	
form f14				form f16	
form f14				form f17	
Line 21 Display:					
Line 22					
Line 23					
MSG: 1		Field must be entered		application	

Figure 5-113b Test Verification

Pressing the <ENTER> key without entering any data results in the message that data must be entered in the field.

Command Line		setdom ff8 i1 "left,must enter,character .upper"		form ff1	
<div></div>				<div>17 max 17</div>	
<div></div>					
form ff2	form ff2	form ff3	form ff5	form ff6	form ff7
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form ff4	form ff8				
<div></div>	<div>abc</div>				
form ff4					
<div></div>					
Line 21 Display:					
Line 22:					
Line 23:					
MSG: 1|Field must be entered				application	

Figure 5-113c Data Value "abc" Entered

The character string "abc" is entered in the field i1.

Command Line

setdel f18 if *left,must enter,character ,upper

form f12

form f13

form f14

form f15

form f16

form f17

form f18

form f19

form f20

form f21

form f22

form f23

form f24

form f25

form f26

form f27

form f28

form f29

form f30

form f31

form f32

form f33

form f34

form f35

form f36

form f37

form f38

form f39

form f40

form f41

form f42

form f43

form f44

form f45

form f46

form f47

form f48

form f49

form f50

form f51

form f52

form f53

form f54

form f55

form f56

form f57

form f58

form f59

form f60

form f61

form f62

form f63

form f64

form f65

form f66

form f67

form f68

form f69

form f70

form f71

form f72

form f73

form f74

form f75

form f76

form f77

form f78

form f79

form f80

form f81

form f82

form f83

form f84

form f85

form f86

form f87

form f88

form f89

form f90

form f91

form f92

form f93

form f94

form f95

form f96

form f97

form f98

form f99

form f100

form f101

form f102

form f103

form f104

form f105

form f106

form f107

form f108

form f109

form f110

form f111

form f112

form f113

form f114

form f115

form f116

form f117

form f118

form f119

form f120

form f121

form f122

form f123

form f124

form f125

form f126

form f127

form f128

form f129

form f130

form f131

form f132

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form f136

form f137

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form f144

form f145

form f146

form f147

form f148

form f149

form f150

form f151

form f152

form f153

form f154

form f155

form f156

form f157

form f158

form f159

form f160

form f161

form f162

form f163

form f164

form f165

form f166

form f167

form f168

form f169

form f170

form f171

form f172

form f173

form f174

form f175

form f176

form f177

form f178

form f179

form f180

form f181

form f182

form f183

form f184

form f185

form f186

form f187

form f188

form f189

form f190

form f191

form f192

form f193

form f194

form f195

form f196

form f197

form f198

form f199

form f200

form f201

form f202

form f203

form f204

form f205

form f206

form f207

form f208

form f209

form f210

form f211

form f212

form f213

form f214

form f215

form f216

form f217

form f218

form f219

form f220

form f221

form f222

form f223

form f224

form f225

form f226

form f227

form f228

form f229

form f230

form f231

form f232

form f233

form f234

form f235

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form f253

form f254

form f255

form f256

form f257

form f258

form f259

form f260

form f261

form f262

form f263

form f264

form f265

form f266

form f267

form f268

form f269

form f270

form f271

form f272

form f273

form f274

form f275

form f276

form f277

form f278

form f279

form f280

form f281

form f282

form f283

form f284

form f285

form f286

form f287

form f288

form f289

form f290

form f291

form f292

form f293

form f294

form f295

form f296

form f297

form f298

form f299

form f300

form f301

form f302

form f303

form f304

form f305

form f306

form f307

form f308

form f309

form f310

form f311

form f312

form f313

form f314

form f315

form f316

form f317

form f318

form f319

form f320

form f321

form f322

form f323

form f324

form f325

form f326

form f327

form f328

form f329

form f330

form f331

form f332

form f333

form f334

form f335

form f336

form f337

form f338

form f339

form f340

form f341

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form f357

form f358

form f359

form f360

form f361

form f362

form f363

form f364

form f365

form f366

form f367

form f368

form f369

form f370

form f371

form f372

form f373

form f374

form f375

Figure 5-113d Domain Check Result

As per the domain clause, the string "abc" is shifted to upper case and left justified.

Command Line		setpro ff1 w1 window_1 w1 1 2 -1 w1 2 2		form ff1	
		0		<div>17</div> <div>17</div>	
<div></div> <div></div>					
form ff2	form ff2	form ff3	form ff5	form ff6	form ff7
<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
form ff4	form ff6				
<div></div>	ABC				
form ff4					
<div></div>					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-114a SETPRO Test Case 1

Attach a prompt to the window w1 on the form ff1.

Command Line	setpro f11 w1 window_1 w1 1 2 -1 w1 2 2		form f11
window_1	0		17 max 17
form f12	form f12	form f13	form f15
form f14	form f18		
	ABC		
form f14			
Line 21 Display:	.....	
Line 22	.....	
Line 23	.....	
NSC: 0	application		

Figure 5-114b Case 1 Result

The prompt "window_1" appears centered one line above w1.

Command Line	setpro ff8 " " "blnk line" ; 1		form ff1
window 1	1 1 ; 1 1 1		17 17
form ff2	form ff2	form ff3	form ff5
form ff4	form ff8		
	ABC		
form ff4			
Line 21 Display:	.....	
Line 22	.....	
Line 23	.....	
MSG: 0	application		

Figure 5-114c SETPRO Test Case 2

Define a background prompt for the form ff8 at the position
offset 1 row and 1 column from the upper left corner of ff8.

Command Line	setpra ff8 " " "blnk line" ; :	form ff1
window 1	1 1 : 1 1 1	17 min 17
form ff2	form ff3	form ff5
form ff4	form ff6	form ff7
form ff8	blnk line	
form ff9	ABC	
Line 21 Display:	.....
Line 22	.....
Line 23	.....
MSG: U		application

Figure 5-114d Case 2 Result

The prompt, "blnk line", appears below the prompt, "form ff8".

The screenshot displays a terminal window with a complex graphical user interface. At the top left, a 'Command Line' window is visible. The main area contains several forms labeled 'form ff1' through 'form ff7'. Form ff1 is a large rectangle at the top right. Form ff2 is a small rectangle on the left. Form ff3 is a small rectangle in the center. Form ff4 is a small rectangle at the bottom left. Form ff5 is a small rectangle in the center. Form ff6 is a small rectangle on the right. Form ff7 is a small rectangle on the right. Below form ff4, there is a 'blink line' and a box containing 'ABC'. At the bottom, there is a 'Line 21 Display:' section with three lines of text, and a 'WSG: 0' indicator on the left and 'application' on the right.

Figure 5-114e SETPRO Test Case 3

Attach a prompt to the window field w3 on ff1 that is positioned relative to w3, centered vertically and offset 2 horizontally.

Command Line window 1

setpro ff1 w3 <-w3 w3 2 1 0 w3 3 1 2

form ff1

17 17

<-w3

form ff2 form ff3 form ff4 form ff5 form ff6 form ff7

form ff4 form ff8 blink line ABC

form ff4

Line 21 Display:
Line 22
Line 23

MSG: 0 application

Figure 5-114f Case 3 Result

The prompt, "<- w3", appears on the form ff1.

Command Line window 1	setatt ff3 input white black bold.unders core,slowblink,reverse,tabfield		form ff1
<div></div>		<div>17 xxx 17</div>	<-v3
form ff2	form ff2	form ff3	form ff5
<div></div>	<div></div>	<div></div>	<div></div>
form ff4	form ff8		
<div></div>	blank line		
	ABC		
form ff4			
<div></div>			
Line 21 Display:			
Line 22			
Line 23			
MSC: 0	application		

Figure 5-115a SETATT Test Case

Define an attribute clause for "input" on the form ff3.

Command Line		setatt ff3 input white black bold,unders		form ff1	
window 1		core,slowblink,reverse,tabfield		17 RUN	
				17	
				<-v3	
form ff2		form ff2		form ff3	
form ff2		form ff3		form ff5	
form ff4		form ff8		form ff6	
form ff4		blink line		form ff7	
form ff4		ABC			
Line 21 Display:					
Line 22					
Line 23					
NSC: 0		application			

Figure 5-115b Test Case Result

The item i1 on ff3 has the display attribute "input" and now shows the properties defined for this attribute: a foreground color of white and background color of black. It is also bold, underscore, slowblink, reverse, and tabfield.

Command Line		setdis ff3 i1 output		form ff1	
window 1				<div>17 MAX</div> <div>17</div> <div><-v3</div>	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4		blink line		form ff6	
form ff4		ABC		form ff7	
Line 21 Display:					
Line 22					
Line 23					
MSG: 0				application	

Figure 5-116a SETDIS Test Case 1

Define the display attribute of item i1 on form ff3 to be output.

Command Line window 1		setdis ff3 i1 output		form ff1	
				<div>17 mm</div> <div>17</div> <div><-v3</div>	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
<div>blank line</div> <div>ABC</div>				form ff6	
form ff4				form ff7	
Line 21 Display:					
Line 22					
Line 23					
MSG: 0 application					

Figure 5-116b Case 1 Result

Since the field i1 contains no data, it does not appear on the form ff3.

Command Line		setdis ff3 i1 input		form ff1	
window 1				<div>17 max</div> <div>17</div> <div><-v></div>	
<div>form ff2</div> <div>form ff2</div> <div>form ff3</div> <div>form ff5</div> <div>form ff6</div> <div>form ff7</div>		<div>form ff8</div> <div>blink line</div> <div>ABC</div>			
<div>form ff4</div> <div>Line 21 Display:</div> <div>Line 22</div> <div>Line 23</div>					
NSC: 0				application	

Figure 5-116c Return Attribute to Input

Use SETDIS again to reset i1's display attribute to input.

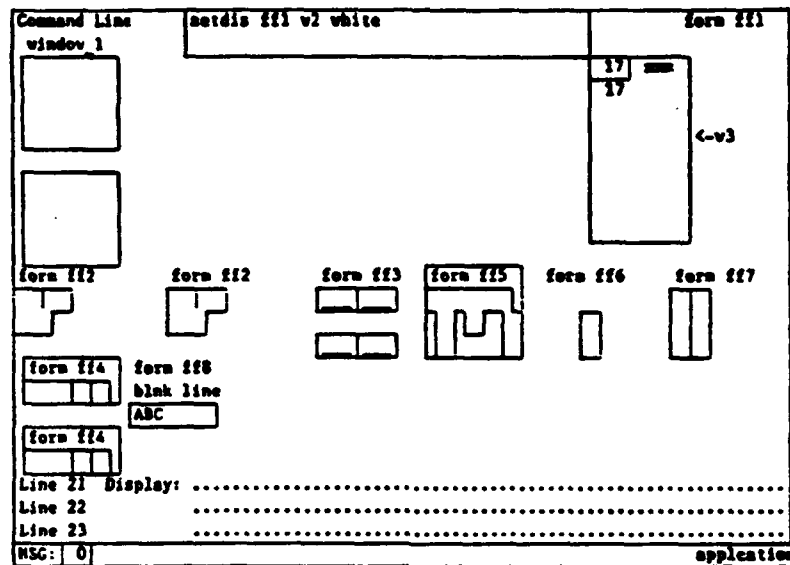


Figure 5-116d SETDIS Test Case 2

Set the display color of the window w2 on form ffl to be white instead of its original color, black.

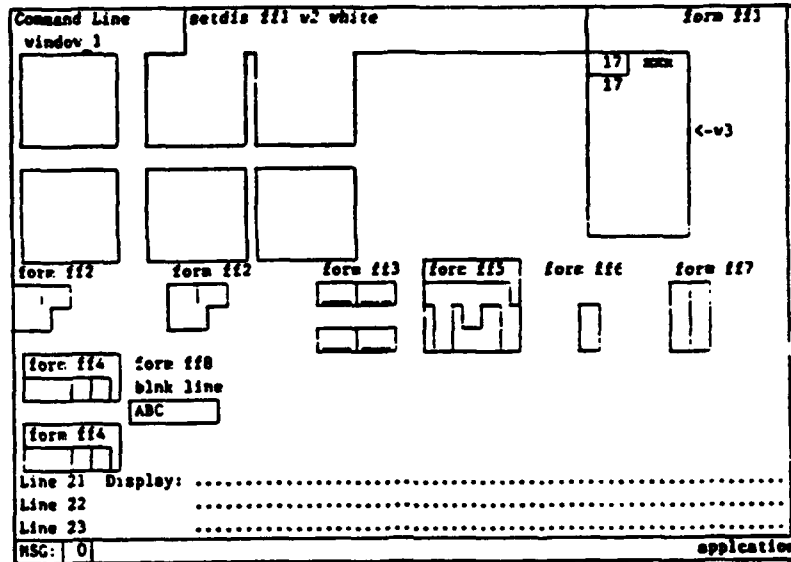


Figure 5-116e Case 2 Result

This makes all four occurrences of the window visible against the black background of the containing form, ff1.

Command Line		sethlp ff3 i1 a		form ff1	
window 1				<div>17</div> <div>17</div> <div><-w3</div>	
form ff2		form ff2		form ff3	form ff5
form ff4		form ff9		form ff6	form ff7
blank line		ABC			
form ff4					
Line 21 Display:					
Line 22					
Line 23					
MSG: 1 Press the <HELP> key. application					

Figure 5-117a SETHLP Test Case 1

Define the help for the item field i1 on form ff3 to be application help.

Command Line		sethlp f13 i1 a		form f11	
window 1				<div>17</div> <div>17</div> <div><-v3</div>	
form f12		form f12		form f13	
form f14		form f18		form f15	
<div>blank line</div> <div>ABC</div>		form f16		form f17	
form f14					
Line 21 Display:					
Line 22					
Line 23					
MSG: 1 This is an application help				application	

Figure 5-117b Case 1 Result

Positioning the cursor in item field i1 and pressing the <HELP> key causes the message to appear in the message line.

Command Line sethlp ff3 i1 s "test string" Form ff1

window 1

17 17

<-v3

form ff2 form ff2 form ff3 form ff5 form ff6 form ff7

form ff4 form ff8
blank line
ABC

form ff4

Line 21 Display:
Line 22
Line 23

MSG: 2 Press the <HELP> key. application

Figure 5-117c SETHLP Test Case 2

Help for the item field i1 on form ff3 is defined to be a string that will be displayed in the message line.

Command Line		sethlp ff3 i1 s "test string"		form ff1	
window 1				<div>17</div> <div>17</div> <div><-v3</div>	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
<div>blank line</div> <div>ABC</div>		form ff6		form ff7	
Line 21 Display:					
Line 22					
Line 23					
MSG: 3 test string		application			

Figure 5-117d Case 2 Result

Positioning the cursor in item field i1 and pressing the <HELP> key causes the message to appear in the message line. Press the <ENTER> key to continue.

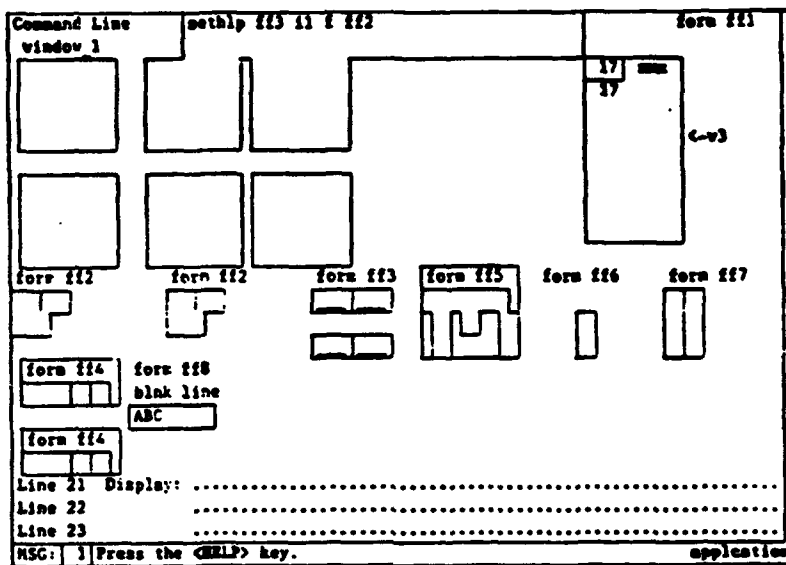


Figure 5-117e SETHLP Test Case 3

Help for the item field i1 on form ff3 is defined to be the form ff2.

form ff2

MSG: 1 Press the <HELP> key.

application

Figure 5-117f Case 3 Result

When the cursor is in the item field i1 on the form ff3 and the <HELP> key is pressed, the form ff1 is replaced by the form ff2 on the terminal screen. Press the <QUIT> key to return to ARTEST and then press the <ENTER> key to continue.

Command Line		setloc ff2 i2 il(1); 1 1 1 il(2); 1 1 3				form ff1	
window 1						<div>17 max</div> <div>17</div> <div>(-0)</div>	
form ff2		form ff2		form ff3		form ff5	
form ff4		form ff8		form ff6		form ff7	
blnk line		ABC					
form ff4							
Line 21 Display:							
Line 22							
Line 23							
NSC: 0		application					

Figure 5-118a SETLOC Test Case 1

Change the location of the item field i2 on the form ff2.
Define it to be positioned relatively to the first and second
occurrences of il.

Command Line		setloc ff2 i2 il(1); 1 1 1 il(2); 1 1 3		form ff:	
window 1				<div style="border: 1px solid black; padding: 2px;"> 17 max 17 <-v3 </div>	
<div style="border: 1px solid black; width: 50px; height: 30px;"></div>		<div style="border: 1px solid black; width: 50px; height: 30px;"></div>			
<div style="border: 1px solid black; width: 50px; height: 30px;"></div>		<div style="border: 1px solid black; width: 50px; height: 30px;"></div>			
form ff2		form ff2		form ff3	
<div style="border: 1px solid black; width: 50px; height: 20px;"></div>		<div style="border: 1px solid black; width: 50px; height: 20px;"></div>		<div style="border: 1px solid black; width: 50px; height: 20px;"></div>	
form ff4		form ff8		form ff5	
<div style="border: 1px solid black; width: 50px; height: 20px;"></div>		<div style="border: 1px solid black; width: 50px; height: 20px;"></div>		<div style="border: 1px solid black; width: 50px; height: 20px;"></div>	
<div style="border: 1px solid black; width: 50px; height: 20px;"></div>		<div style="border: 1px solid black; width: 50px; height: 20px;"></div>		<div style="border: 1px solid black; width: 50px; height: 20px;"></div>	
Line 21 Display:		Line 22		Line 23	
MSG: 0				application	

Figure 5-118b Case 1 Result

The item field i2 appears 1 row below il(1) and 3 columns to the right of the left edge of il(2).

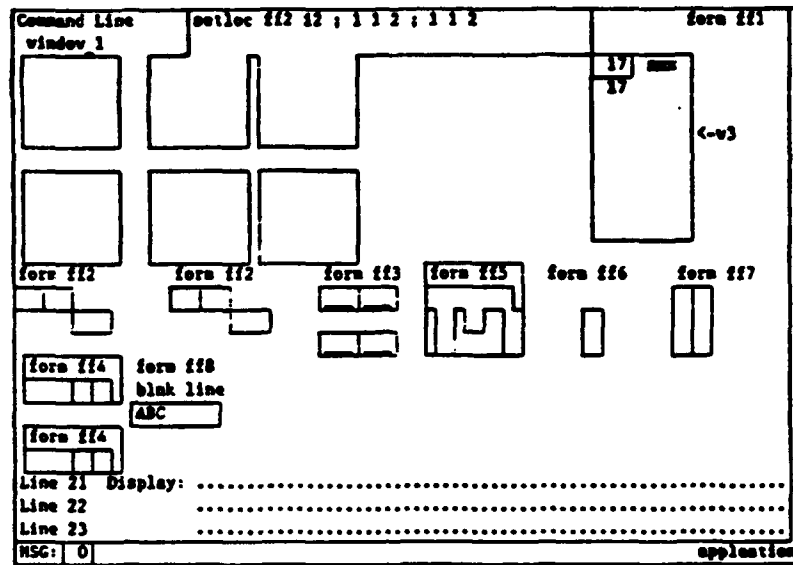


Figure 5-118c SETLOC Test Case 2

Redefine the position of i2 on ff2 in absolute terms.

Command Line		setloc ff2 i2 ; 1 1 2 ; 1 1 2		form ff3	
window 1				<div>17</div> <div>17</div> <div><-v3</div>	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4		blank line		form ff6	
form ff4		ABC		form ff7	
Line 21 Display:					
Line 22					
Line 23					
NSC: 0				application	

Figure 5-118d Case 2 Result

The item field i2 is placed a row 3 and column 3 on form ff2.

Command Line		setnam ff8 i1 i2		form ff1	
window 1				<div>17 mm</div> <div>17</div> <div><-v3</div>	
form ff1	form ff2	form ff3	form ff5	form ff6	form ff7
form ff4	form ff8				
	blank line				
	ABC				
form ff4					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-119a SETNAM Test Case 1

Change the name of the item field i1 on ff8 to be i2.

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Command Line window 1

pdata f10.i2 22345678

form f11

form f12

form f12

form f13

form f15

form f16

form f17

form f14

form f18

blnk line

123-5678

form f14

Line 21 Display:

Line 22

Line 23

NSC: 0

application

Figure 5-119b Test Verification

Use PDATA to insert data into the item field now named i2. This verifies that the name change was successful.

Command Line		setdim ff3 i1 1 1 2 v 1		form ff1	
window 1				<div>17</div> <div>17</div> <div><-v3</div>	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
<div>blnk line</div> <div>12345678</div>		form ff6		form ff7	
Line 21 Display:		Line 22		Line 23	
NSC: 0				application	

Figure 5-120a SETDIM Test Case

Form ff3 currently contains the item field i1 that repeats twice horizontally and then this array is repeated twice vertically. The vertical repetition is changed to be 1 displayed instance and 2 actual instances.

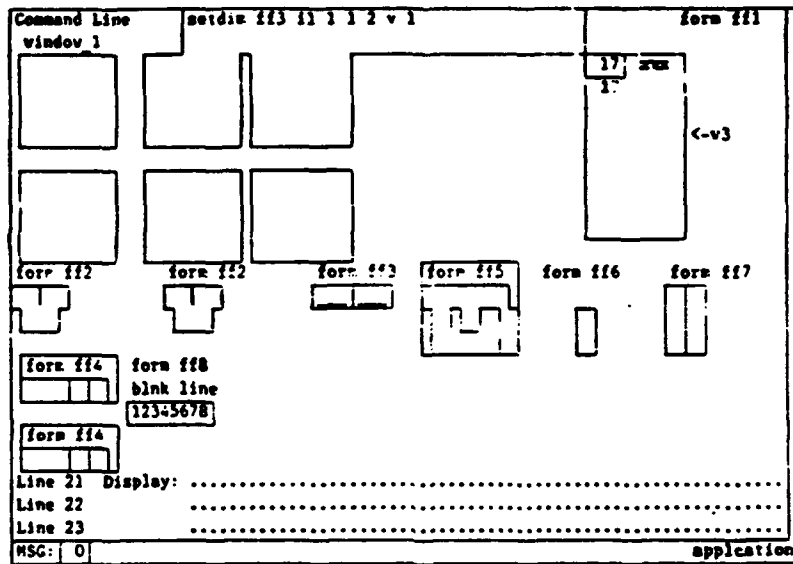


Figure 5-120b Test Result

The second vertical repetition of il array is no longer displayed.

Command Line window 1

settyp ff1 ff3 1

form ff1

17

17

<-v3

form ff2

form ff2

form ff3

form ff5

form ff6

form ff7

form ff4

form ff8

blink line

12345678

form ff4

Line 21 Display:

Line 22

Line 23

MSG: 0

application

Figure 5-121a SETTYP Test Case 1

Change the form field ff3 on the form ff1 to an item field.

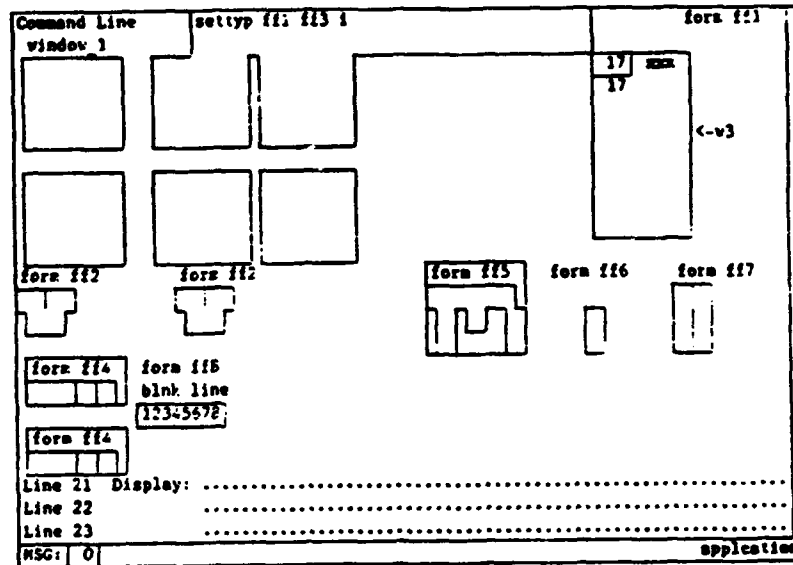


Figure 5-121b Case 1 Result

Form ff3 no longer appears on the screen.

Command Line window 1

pdate f11.f13 "1234567890"

form f11

form f12

form f13

form f14

form f15

form f16

form f17

Line 21 Display:

Line 22

Line 23

MSG: 0

application

Figure 5-121c Test Verification

To verify that the field is now an input item, PDATA is used to enter the value "1234567890".

Command Line
window 1

pdata ff1.ff3 *1234567890

form ff1

form ff2

form ff2

form ff3

form ff4

form ff5

form ff6

form ff7

form ff8

form ff9

Line 21 Display:
Line 22
Line 23
MSG: 0 application

Figure 5-122a SETSIZ Test Case 1

Change the size of the field ff3 on the form ff1 to be 4 by 4.

Command Line		setsiz ff1 ff3 4 4		form ff1	
vindow 1				<div>17/ 2000</div> <div>17</div> <div><-v3</div>	
form ff2		form ff2		<div>1234</div> <div>5678</div> <div>90</div>	
form ff4		form ff8		form ff5	
<div>1234</div> <div>5678</div>		<div>12345678</div>		form ff6	
form ff4				form ff7	
<div>1234</div> <div>5678</div>				<div>1234</div> <div>5678</div>	
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-122b Case 1 Result

The reorganization of the data in ff3 shows that the size was changed.

Command Line		setsiz ff1 ff3 10 4		form ff1	
window 1				<div>17 200</div> <div>17</div> <div><-v3</div>	
form ff2	form ff2	1234	form ff5	form ff6	form ff7
		5678			
		90			
form ff4	form ff8	<div>blnk line</div> <div>12345678</div>			
form ff4					
Line 21 Display:					
Line 22					
Line 23					
MSG: 0		application			

Figure 5-122c SETSIZ Test Case 2

Change the size of the item field ff3 on form ff1 to 10 by 4.

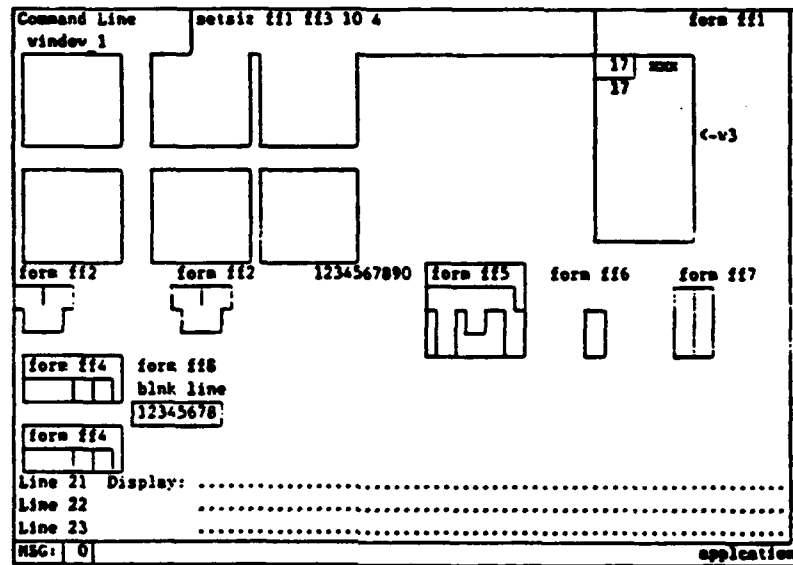


Figure 5-122d Case 2 Result

The data contained in ff3 are reorganized to reflect the size change.

Command Line window_1

settyp ff1 ff3 f

form ff1

form ff2

form ff3

1234567890

form ff5

form ff6

form ff7

form ff4

form ff8

blink line

12345678

Line 21 Display:
Line 22
Line 23

MSG: 0

application

Figure 5-123a SETTYP Test Case 2

Change the item field ff3 back to a form.

Command Line settyp ff1 ff3 f form ff1

window 1

17/ 17/ MAX

<-v3

form ff2 form ff2 form ff3 form ff5 form ff6 form ff7

form ff4 form ff8
blank line
12345678

form ff4

Line 21 Display:
Line 22
Line 23
MSG: 0 application

Figure 5-123b Case 2 Result

The original form ff3 reappears.

Command Line window 1

setsi2 ff3 i1 2 1

form ff1

17 17

<-v3

form ff2

form ff3

form ff4

form ff5

form ff6

form ff7

form ff8

blank line

12345678

Line 21 Display:

Line 22

Line 23

MSG: 0

application

Figure 5-124a SETSI2 Test Case 3

Change the size of the item field i1 on form ff3 to be 2 by 1 instead of 3 by 1.

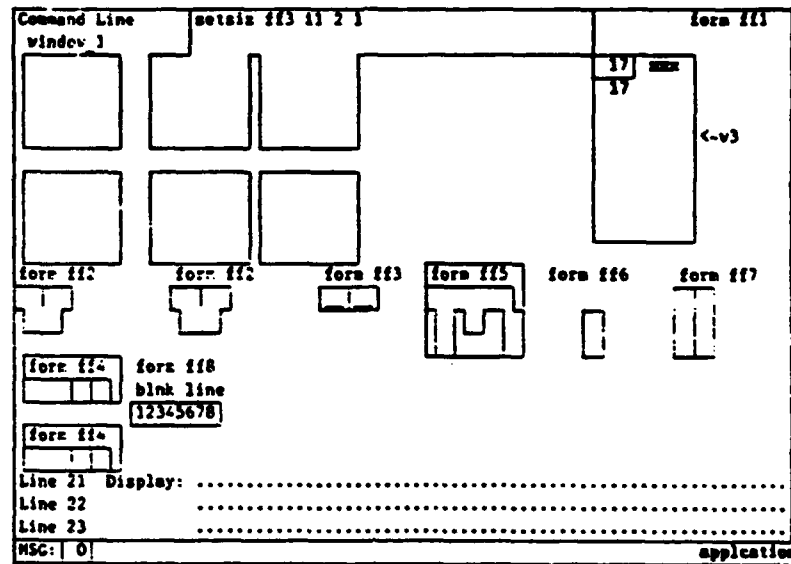


Figure 5-124b Case 3 Result

Since i1 is an item array, the size is changed on all instances of i1.

Command Line		setsiz ff3 i1 4 1		form ff1	
window 1				<div>171</div> <div>17</div> <div><-v3</div>	
form ff2	form ff2	form ff3	form ff5	form ff6	form ff7
form ff4	form ff8				
	blank line				
	12345678				
form ff4					
Line 21 Display:					
Line 22:					
Line 23:					
HSC: 0		application			

Figure 5-124c SETSIZ Test Case 4

Increase the size of item i1 on form ff3 to be larger than the original size of 3 by 1.

Command Line		setsis ff3 il 4 1		form ff1	
window 1				37 37 37 37 C-v3	
form ff2		form ff2		form ff3	
form ff4		form ff8 blink line 12345678		form ff5	
form ff4				form ff6	
Line 21 Display:				form ff7	
Line 22					
Line 23					
MSG: 0				application	

Figure 5-124d Case 4 Result

Again, the size is increased to 4 by 1 on all instances of il in the form ff3.

Command Line window 1

settyp ff1 ff7 w

form ff1

form ff2

form ff2

form ff3

form ff5

form ff6

form ff7

form ff4

form ff8

12345678

Line 21 Display:
Line 22
Line 23

MSG: 0 application

Figure 5-125a SETTYP Test Case 3

Change the form field ff7 on the form ff1 a window field.

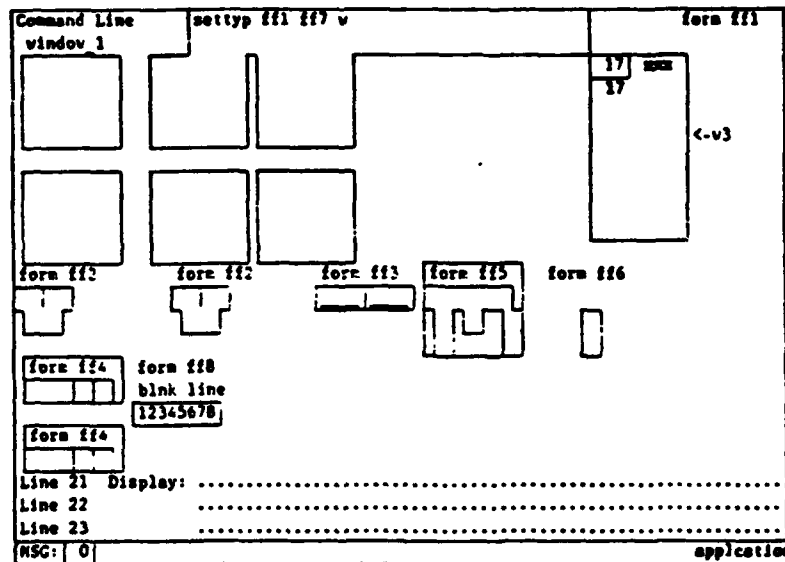


Figure 5-125b Case 3 Result

By default the background color of the window is black, the same as its containing form and so it does not appear.

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The screenshot displays a terminal window with a graphical user interface. At the top left, a 'Command Line window 1' is visible. The main area contains several windows and forms:

- A large window at the top center labeled 'addfrm f11.f12 f13'.
- A window at the top right labeled 'form f11' containing a table with two rows: '17' and '37', and a column labeled 'sum'.
- A window on the left labeled 'form f12'.
- A window in the middle left labeled 'form f12'.
- A window in the middle center labeled 'form f13'.
- A window in the middle right labeled 'form f15' containing a complex grid pattern.
- A window on the far right labeled 'form f16'.
- A window at the bottom left labeled 'form f14' containing a table with two rows: '12345678' and '12345678'.
- A window at the bottom center labeled 'form f16' containing a table with two rows: '12345678' and '12345678'.
- A window at the bottom right labeled 'form f16' containing a table with two rows: '12345678' and '12345678'.

 At the bottom of the terminal, there is a status bar with the following text:

- 'Line 21 Display:'
- 'Line 22'
- 'Line 23'
- 'WSC: 0'
- 'application'

Figure 5-125c Test Verification

To verify that field ff7 is now a window field, use ADDFRM to add the form ff3 to it.

Command Line		addfrm ff1,ff7 ff3		form ff1	
window 1				<div>17</div> <div>17</div> <div><-v3</div>	
form ff2		form ff2		form ff3	form ff5
form ff4		form ff8		form ff6	form ff3
<div>blnk line</div> <div>12345678</div>					
Line 21 Display:					
Line 22					
Line 23					
NSC: 0				application	

Figure 5-125d ADDFRM Result

Form ff3 does appear where the form ff7 was.

Command Line		setval ff14 i1 ***zzz***		form ff1	
window 1				<div>17</div> <div>17</div> <div><-v3</div>	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff3	
<div>12345678</div> <div>12345678</div>		<div>12345678</div> <div>12345678</div>		<div>12345678</div> <div>12345678</div>	
Line 21 Display:		Line 22		Line 23	
MSG: 0				application	

Figure 5-126a SETVAL Test Case 1

Define a VALUE clause for the item field i1 on the form ff14 which is displayed in window w3.

Command Line window 1

setval ff14 ff1 xxx_sxx

form ff1

form ff2

form ff3

form ff4

form ff5

form ff6

form ff7

Line 21 Display:

Line 22

Line 23

MSG: 0

application

Figure 5-126b Case 1 Result

The VALUE clause defines the value of i1 to be "zzz". Since i2 has a value clause set as "i1", "zzz" is also displayed as that field's value.

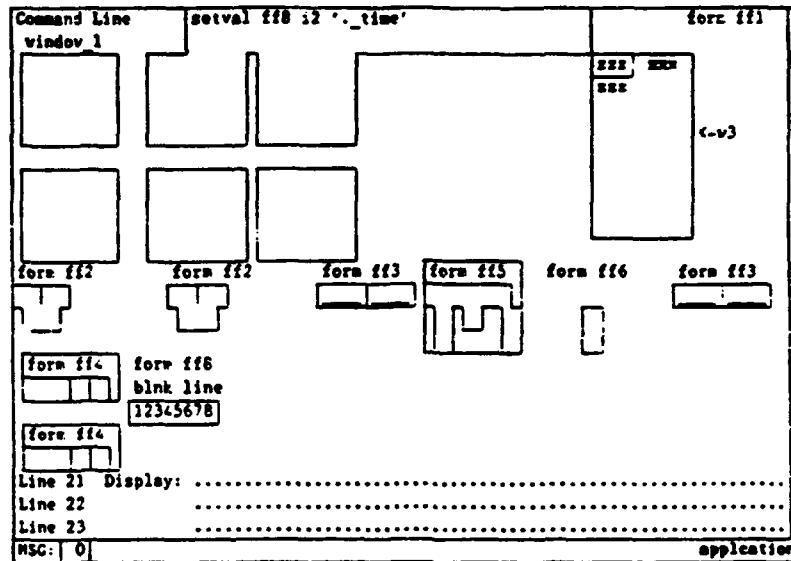


Figure 5-127a SETVAL Test Case 2

Define the value of the item i2 on ff8 to be the built-in TIME function.

Command Line window 1

serial ff8 i2: \'.time'

form ff1

222 222

<-v3

form ff2

form ff3

form ff4

form ff5

form ff6

form ff7

form ff8

9:41:04

Line 21 Display:
Line 22
Line 23

MSG: 0 application

Figure 5-127b Case 2 Result

The current time appears in the item field i2 on form ff8.

Command Line setval ff3 i1 "12" + 2

window 1

form ff1

form ff2

form ff2

form ff3

form ff5

form ff6

form ff7

form ff4

form ff8

blank line

9:41:05

form ff4

Line 21 Display:

Line 22

Line 23

MSG: 0 application

Figure 5-128a SETVAL Test Case 3

Define the value of the item field i1 on the form ff3 to be the expression "12" + 2.

Figure 5-128b Case 3 Result

Since the item field i1 is a repeated field on the form ff3, the result of evaluating the expression, 14, is placed in each array instance. This test also shows that the appropriate conversion is done to perform the arithmetic.

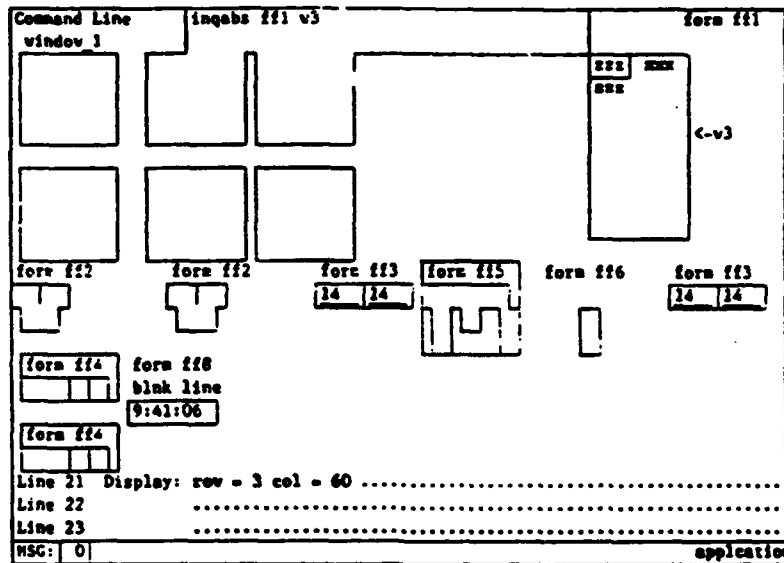


Figure 5-129a INQABS Test Case 1 with Result

Return the absolute position of window w3 on the form ff1. It is row 3 and column 60.

Command Line		Inqabs ff2 i1		form ff1	
window 1				222 222 222 222 ←v3	
form ff2		form ff2		form ff3	
form ff4		form ff8 blink line 9:41:06		form ff5	
form ff4				form ff6	
Line 21 Display: row = 2 col = 2				form ff3	
Line 22					
Line 23					
MSG: 0				application	

Figure 5-129b INQABS Test Case 2 with Result

Return the absolute position of item i1 on form ff2. It is row 2 and column 2.

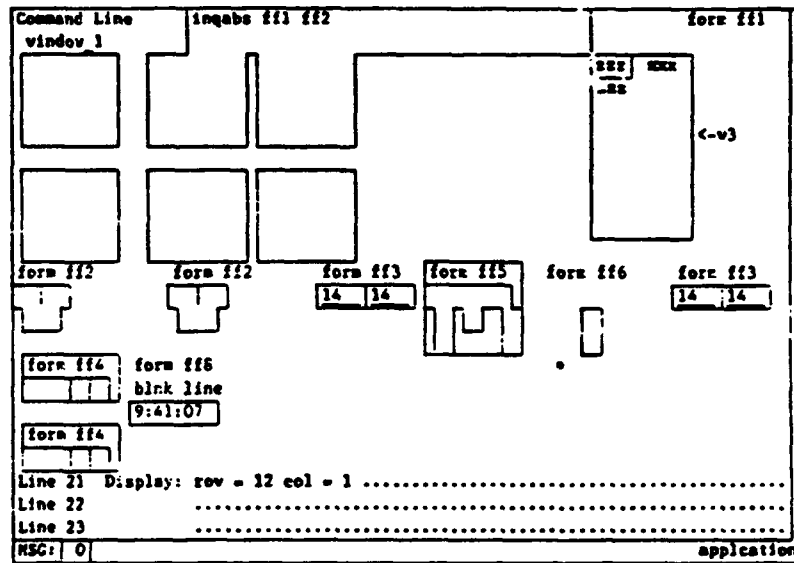


Figure 5-129c INQABS Test Case 3 with Result

Return the absolute position of form ff2 on form ff1. It is row 12 and column 1.

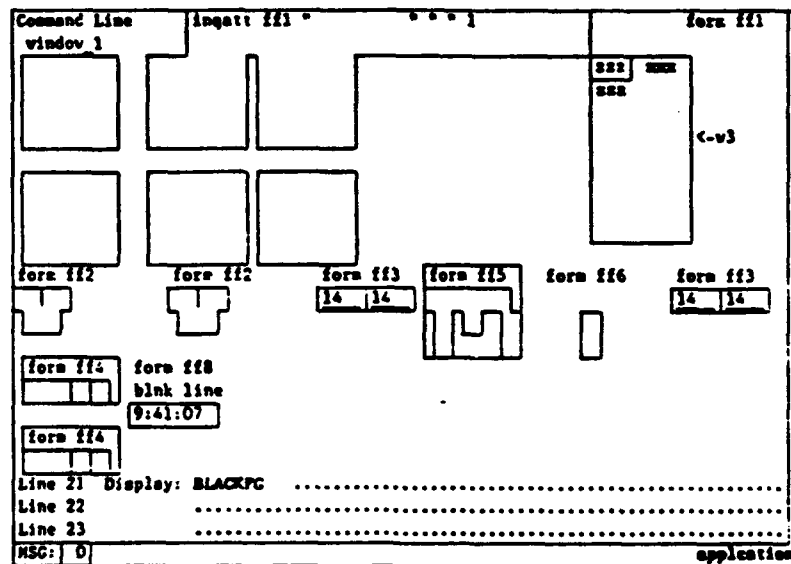


Figure 5-130a INQATT Test Case 1 with Result

Return the first attribute defined for the form ff1. It is BLACKFG.

Command Line		inqatt ff1 blackfg d		form ff1	
window 1				<div> <div>SSS</div> <div>SSS</div> </div> <div><-v3</div>	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4		form ff6		form ff7	
<div> <div>blnk line</div> <div>9:41:08</div> </div>		<div> <div>14 14</div> </div>		<div> <div>14 14</div> </div>	
Line 21 Display: BLACK		Line 22		Line 23	
NSC: 0				application	

Figure 5-130b INQATT Test Case 2 with Result

Inquire what the display color associated with the attribute BLACKFG is. It is black.

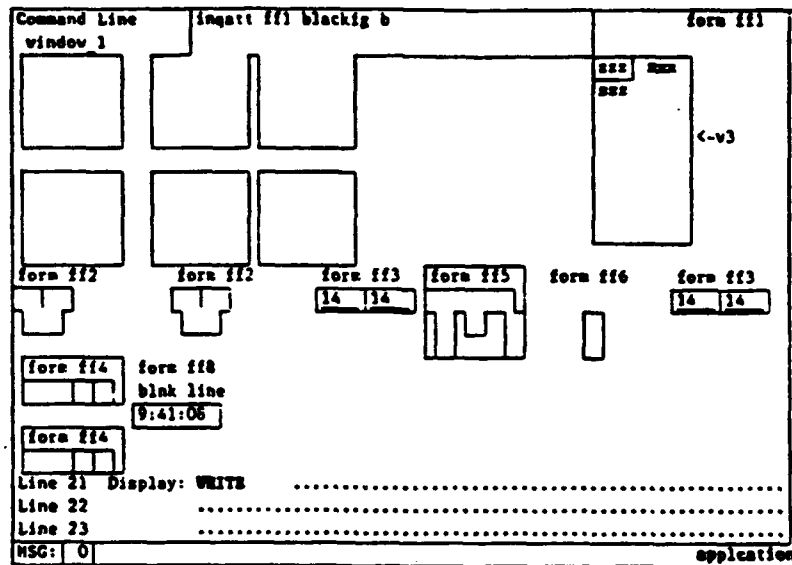


Figure 5-130c INQATT Test Case 3 with Result

Inquire what the background color associated with the attribute BLACKFG is. It is white.

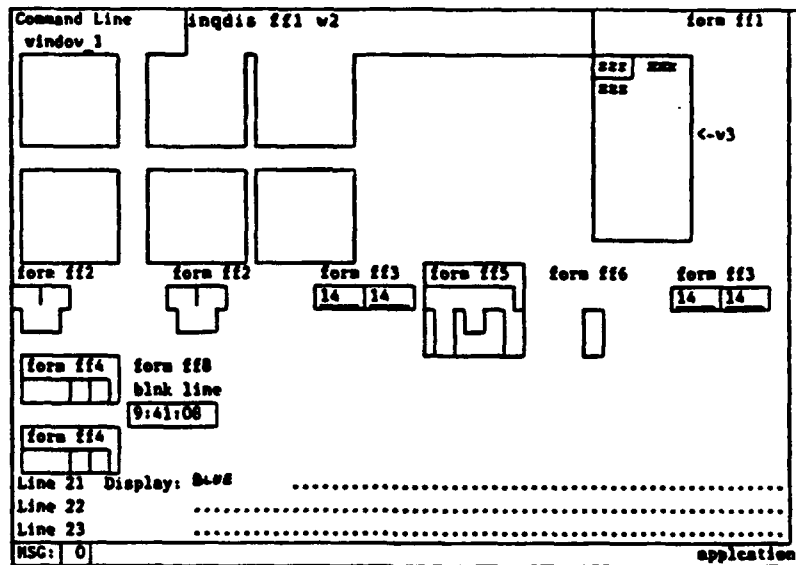


Figure 5-131a INQDIS Test Case 1 with Result

Return the background color attribute for ff1. It is BLUE.

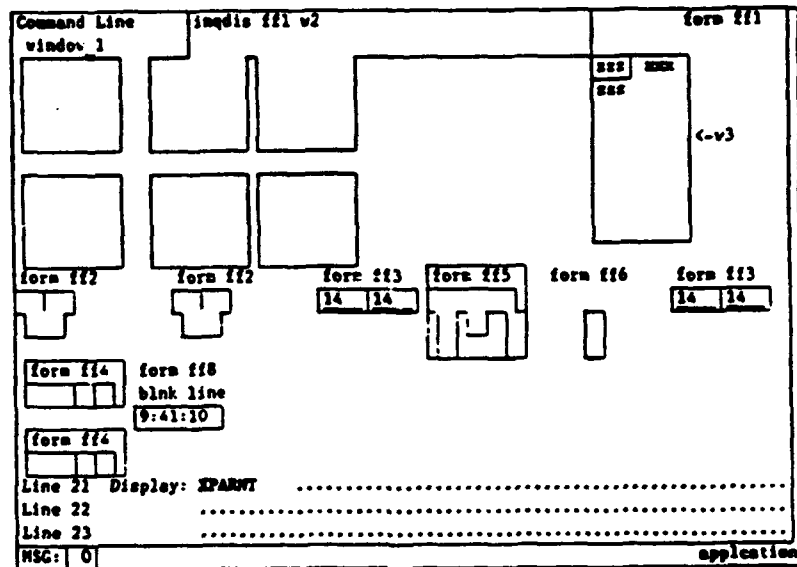


Figure 5-131b INQDIS Test Case 2 with Result

Return the background color attribute for the window w2 on the form ff1. It is XPARNT.

Command Line window 1

inqdis ff1 ff2

form ff1

SSS SSS

SSS

<-v3

form ff2 form ff2 form ff3 form ff5 form ff6 form ff7

14 14 14 14 14 14

form ff4 form ff8

blink line

9:41:10

form ff4

Line 21 Display: XPARNT

Line 22

Line 23

NSC: 0 application

Figure 5-131c INQDIS Test Case 3 with Result

Return the background color attribute for the form ff2 on the form ff1. It is XPARNT.

Command Line		inqdis ff1 i0		form ff1	
window 1				SSS SSS SSS	
				<-v3	
form ff2		form ff2		form ff3	
1		1		14 14	
form ff4		form ff8		form ff5	
		blank line		14 14	
form ff4		9:41:11		form ff6	
				14 14	
Line 21 Display: TEXT		.....		
Line 22		.....		
Line 23		.....		
MSC: 0				application	

Figure 5-131d INQDIS Test Case 4 with Result

Return the display attribute for the item field i0 on the form ff1. It is TEXT.

Command Line		inqdis ffl i99		form ffl	
window 1				SES SES SES	
				C-v3	
form ffl2		form ffl2		form ffl3	
form ffl2		form ffl5		form ffl6	
form ffl4		form ffl8		form ffl3	
form ffl4		blank line		14 14	
Line 21 Display:		9:43:12		14 14	
Line 22					
Line 23					
MSG: 1 Field not found				application	

Figure 5-131e INQDIS Test Case 5 with Result

Inquire what is the display attribute for a non-existent field, i99, on form ffl. The message "Field not found" is sent to the message line.

[illegible]

Figure 5-131f INQDIS Test Case 6 with Result

Inquire what the display attribute is for a field on a nonexistent form, ff56. The message "Form not found" is sent to the message line.

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[illegible]

Figure 5-132 INQDOM Test Case with Result

Return the entire DOMAIN clause associated with the item field i2 on form ff2. It is NUMERIC, MINIMUM 1, MAXIMUM 6.

Command Line		inqhlp ff4 i1		form ff1	
window_1				<div> <div>222</div> <div>222</div> <div><-v></div> </div>	
form ff2		form ff2		form ff3	
				form ff5	
				form ff6	
				form ff3	
form ff4		form ff8			
		b1nk line			
		9:41:14			
form ff4					
Line 21 Display: Help string - This is a help string					
Line 22					
Line 23					
MSG: 2		Form not found		application	

Figure 5-133a INQHLP Test Case 1 with Result

Inquire what the "help" associated with the item field i1 on form ff4 is. The help for this field is the string "This is a help string".

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Figure 5-133b INQHLP Test Case 2 with Result

Inquire what is "help" associated with the item field i1 on the form ff5 is. The help has defined to be application help.

The screenshot displays a terminal window with a graphical user interface. At the top left, a label reads "Command Line window 1". The interface contains several rectangular windows and forms, some labeled "form ff1" through "form ff15". A large vertical rectangle on the right is labeled "form ff1" at the top and "(-v)" on its right side. Below this, a horizontal bar contains the text "SSS SSS". Other forms include "form ff2", "form ff3", "form ff4", "form ff5", "form ff6", "form ff7", "form ff8", and "form ff9". Some forms contain text like "14 14" or "9:41:16". At the bottom, a status bar shows "Line 21 Display: Help form - PATCON", "Line 22", "Line 23", and "MSG: 2 Form not found". The word "application" is visible in the bottom right corner.

Figure 5-133c INQHLP Test Case 3 with Result

Inquire what is the "help" associated with the item field i4 on the form ff1. The help is the form PATHCOM.

[illegible]

Figure 5-134a INQLOC Test Case 1 with Result

Return the location of the item field i3 on the form ff14. The location is specified relative to the field i1 and is adjacent to i1.

Command Line window 1

inqluc ffl 14

form ff1

form ff2

form ff3

form ff4

form ff5

form ff6

form ff7

form ff8

form ff9

blink line

9:41:19

Line 21 Display: i, 1, 1, 0; i, 1, 1, 19

Line 22

Line 23

MSG: 2 Form not found

application

Figure 5-134b INQLOC Test Case 2 with Result

Return the location of the item field i4 on the form ffl. The position of field i4 is offset 1 row 19 columns from the origin of ffl.

Command Line		crtfrm test		form ffl	
window 1				SSR	SSR
				ASR	
					<-v3
form f12	form f17	form f13	form f15	form f16	form f18
		14 14			14 14
form f14	form f18				
	blank line				
	9:41:20				
form f14					
Line 21	Display:	.....		
Line 22		.....		
Line 23		.....		
MSG: 2 Form not found		application			

Figure 5-135a INQPRO Test Preparation

Create the form test.

Command Line		rp1frm v3 1 test		form ff1	
window 1					
				<-v3	
form ff2		form ff2		form ff3	
				form ff5	
				form ff6	
				form ff3	
form ff4		form ff8			
		blnk line			
		9:41:21			
form ff4					
Line 21 Display:		.....		
Line 22		.....		
Line 23		.....		
MSG: 2 Form not found				application	

Figure 5-135b Display the Form Test

Add the form test to window w3.

Command Line setpro test * * test : 1 1 0 ;

window 1

form ff1

test

<-v3

form ff2

form ff2

form ff3

form ff5

form ff6

form ff13

form ff7

form ff8

blink line

9:41:22

form ff4

Line 21 Display:

Line 22

Line 23

MSG: 2 Form not found application

Figure 5-135c Add First Prompt

Add the form prompt "test".

Command Line		setpro test "		" abcd ; 1 1 1 ;		form ff1	
window 1		1 1 1				test abcd	
						<-v3	
form ff2		form ff2		form ff3		form ff5	
1		T		14 14		form ff6	
						form ff3	
						14 14	
form ff4		form ff8					
blnk line		9:41:23					
form ff4							
Line 21 Display:		.....				
Line 22		.....				
Line 23		.....				
MSG: 2		Form not found				application	

Figure 5-135d Add Second Prompt

Add the form prompt "abcd".

Command Line window 1	setpro test " 1 1 1	" test ; 1 1 2 ;	form ff1
			test abcd test ←v3
form ff2	form ff2	form ff3	form ff5
		14 14	
form ff4	form ff8		form ff6
	blink line		
	9:41:24		form ff3
			14 14
Line 21 Display:			
Line 22			
Line 23			
MSG: 2 Form not found			application

Figure 5-135e Add Third Prompt

Add another form prompt "test".

Command Line		window 1		inqpro test *		form f11	
						test abcd test ←v3	
form f12		form f12		form f13		form f15	
				14 14			
form f14		form f10		form f16		form f13	
		blnk line				14 14	
form f14		9:41:24					
Line 21 Display: 4, "test" ;, 1, 1, 0; ;, 1, 1, 1							
Line 22							
Line 23							
MSG: 2 Form not found		application					

Figure 5-136a INQPRO Test Case 1 with Result

Return the first prompt string attached to the form test. It is the string "test". The location of the prompt is also returned and is 0 rows and 1 column from the upper left corner of the form test.

Command Line		Inqpro test " 2		form f11	
windc 1				test atcd test ←w3	
form f11	form f12	form f13	form f15	form f16	form f13
		14 14			14 14
form f14	form f18				
	blink line				
	9:41:25				
form f14					
Line 21 Display: 4, "abcd" ; 1, 1, 1; 1, 1, 1, 1					
Line 22					
Line 23					
PSG: 2 Form not found application					

Figure 5-136b INQPRO Test Case 2 with Result

Return the second prompt string attached to the form test. It is the string "abcd". The location of the prompt is also returned and is 1 row and 1 column from the upper left corner of the containing form.

Command Line		inqpro test *		* 4		form f11	
window 1						test abcd test ←v3	
form f12		form f12		form f13		form f15	
1		1		16 16		16 16	
form f14		form f18		form f16		form f17	
b1n1 line		b1n1 line		16:4:12c		16 16	
form f14							
Line 21 Display:		.....		.....		.....
Line 22		.....		.....		.....
Line 23		.....		.....		.....
MSG: 3 invalid index specified						application	

Figure 5-136c INQPRO Test Case 3 with Result

Inquire about a nonexistent prompt string on the form test. The error message "Invalid Index Specified" is returned.

Command Line	rmvpro test *	* test	form ff1
window 1			test abcd test ←w3
form ff2	form ff2	form ff3	form ff5
		14 14	
form ff4	form ff8	form ff6	form ff3
	blnk line		14 14
	9:41:26		
Line 21 Display:	.....	
Line 22	.....	
Line 23	.....	
RSC: 3	Invalid index specified		application

Figure 5-137a RMVPRO Test Case

Remove the prompt string "test" from the form test.

[illegible]

Figure 5-137b Test Result

Since the prompt string "test" occurs twice, they are both removed.


```

Command Line window 1      inqdim ffl ffa 1      form ffl
                                cd
                                (-v)

form ff2      form ff2      form ff3      form ff5      form ff6      form fff
04 04      04 04      04 04      04 04      04 04      04 04

form ffa      form ffb
blink line
0:41:27

form ffa
04 04 04

Line 21 Display: direct V   tot elements 2   disp ele 2   spaces 1 .....
Line 22 .....
Line 23 .....

MSG: 3 Invalid index specified      application

```

Figure 5-138a INQDIM Test Case 1 with Result

Return the first repeat specification of the field ff4 on the form ff1. The form ff4 is repeated vertically twice with one intervening space and both elements are displayed.

[illegible]

Figure 5-138b INQDIM Test Case 2 with Result

Inquire about a nonexistent repeat specification. The error message "Array Not Found" is displayed in the message line.

The screenshot displays a terminal window with a graphical user interface. At the top, there is a header bar with the text "Command Line" on the left, "inqsrx ff3 11" in the center, and "form ff1" on the right. Below this, the main area contains several rectangular boxes and text elements. On the left, there is a large box labeled "window 1". To its right, there is a box labeled "abcd" and a label "<-v3". Below these, there are several smaller boxes labeled "form ff2", "form ff12", "form ff3", "form ff5", "form ff6", and "form ff3". The "form ff3" boxes contain the text "14 14". At the bottom left, there is a box labeled "form ff6" with the text "blink line" and "9:41:28" below it. The bottom of the terminal shows a command prompt "Line 21 Display: width = 4, depth = 1" followed by "Line 22" and "Line 23". At the very bottom, there is a message "MSG: 4 Array not found" and the word "application" on the right.

Figure 5-139a INQSIZ Test Case 1 with Result

Return the SIZE specification for the item field i1 on the form ff3. The field has a width of 4 and a depth of 1.

Command Line window_1

Inquisi f11 f13

form f11

abcd

<-v3

form f12

form f13

form f14

form f15

form f16

form f17

form f18

form f19

14 14

9:01:29

blink line

Line 21 Display: width = 10, depth = 4

Line 22

Line 23

WSG: 4 Array not found

application

Figure 5-139b INQSIZ Test Case 2 with Result

Return the SIZE specification of the form field ff3 on the form ff1. The field has a width of 10 and a depth of 4.

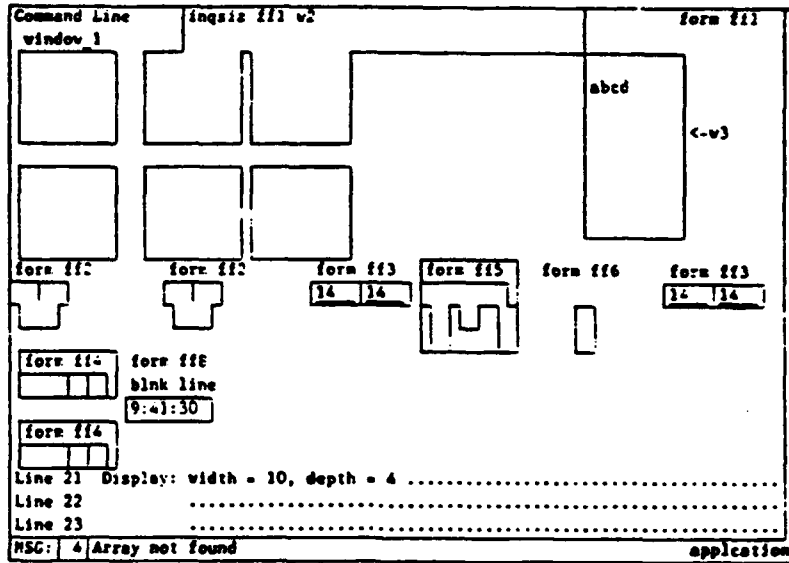


Figure 5-139c INQSIZ Test Case 3 with Result

Return the SIZE specification of the window field w2 on the form ff1. The field has a width of 10 and a depth of 4.

The screenshot shows a terminal window with a graphical user interface. At the top, there is a title bar with the text "Command Line window 1". Below the title bar, there is a large rectangular area containing several smaller rectangular windows. These windows are labeled "form ff1", "form ff2", "form ff3", "form ff4", "form ff5", "form ff6", and "form ff7". The "form ff1" window is the largest and is located in the top right. It contains the text "abcd" and a cursor icon. The "form ff2" window is located in the top left. The "form ff3" window is located in the middle left. The "form ff4" window is located in the bottom left. The "form ff5" window is located in the middle right. The "form ff6" window is located in the bottom right. The "form ff7" window is located in the bottom right. The "form ff1" window also contains the text "<-v3".

Below the graphical area, there is a command line with the text "Line 21 Display: P.....". Below the command line, there is a status bar with the text "MSG: 4 Array not found" and "application".

Figure 5-140a INQTYP Test Case 1 with Result

Inquire what type of the field ff2 on the form ff1 is. The type returned is "F" for form.

Command Line window 1	inqtyp ff1 i0		form ff1		
			abcd	<-v3	
form ff2	form ff2	form ff3	form ff5	form ff6	form ff3
I	I	14 14	14 14		14 14
form ff4	form ff8	form ff4		form ff3	
	blank line	9:41:30			
Line 21	Display: I.....				
Line 22	.....			
Line 23	.....			
MSG: 4 Array not found					application

Figure 5-140b INQTYP Test Case 2 with Result

Inquire what the type of the field i0 on the form ff1 is. The type returned is "I" for item.

Command Line		inqtyp ffl w2		form ffl	
window 1					
form ffl2		form ffl2		form ffl3	
				14 14	
form ffl4		form ffl8		form ffl5	
		blink line			
		9:41:31			
form ffl4				form ffl6	
				form ffl3	
				14 14	
Line 21 Display: W.....					
Line 22					
Line 23					
MSG: 4		Array not found			
application					

Figure 5-140c INQ TYP Test Case 3 with Result

Inquire what type of the field w2 on the form ffl is. The type returned is "W" for window.

[illegible]

Figure 5-141 INQVAL Test Case with Result

Return the VALUE clause defined for the item field i3 on the form ff1. The result is "Display:".

Command Line		rmvatt ff1 blackfg		form ff1	
window 1				abcd <-v3	
form ff2		form ff2		form ff3	
				14 14	
				form ff5	
				form ff6	
				form ff3	
				14 14	
form ff4		form ff8			
		blnk line			
		9:41:32			
form ff4					
Line 21 Display:					
Line 22					
Line 23					
MSG: 4		Array not found		application	

Figure 5-142a RMVATT Test Case 1

Remove the ATTRIBUTE clause defining the attribute BLACKFG for the form ff1.

Command Line		Inqatt ffl *		form ffl	
window 1				abcd	
				<-v3	
form ffl2	form ffl2	form ffl3	form ffl5	form ffl6	form ffl3
		14 14			14 14
form ffl4	form ffl8	blink line			
		9:41:33			
form ffl4					
Line 21 Display: REDFG					
Line 22					
Line 23					
MSG: 4 Array not found application					

Figure 5-142b Verify Case 1 Result

The INQATT routine is used to verify that the attribute definition for BLACKFG has been deleted. BLACKFG was formerly the first attribute associated with form ffl. The first attribute is now REDFG.

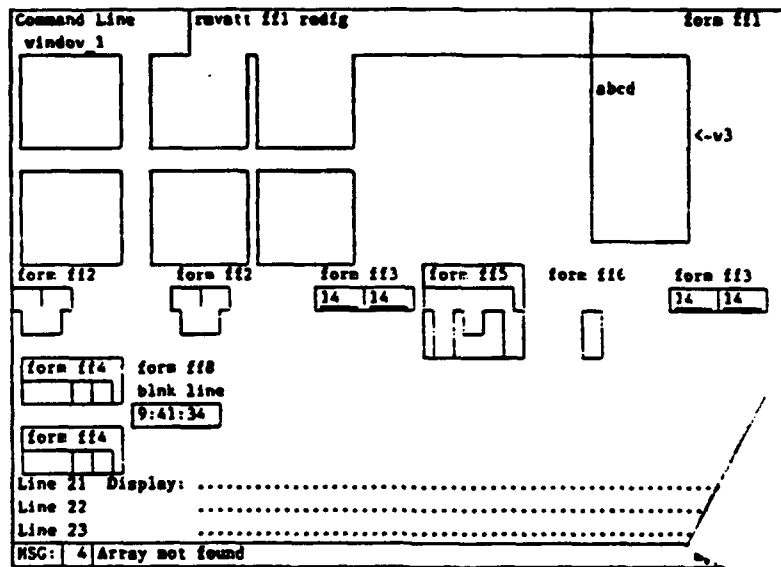


Figure 5-142c RMVATT Test Case 2

Remove the ATTRIBUTE clause defining REDFG as an attribute associated with the form ffl.

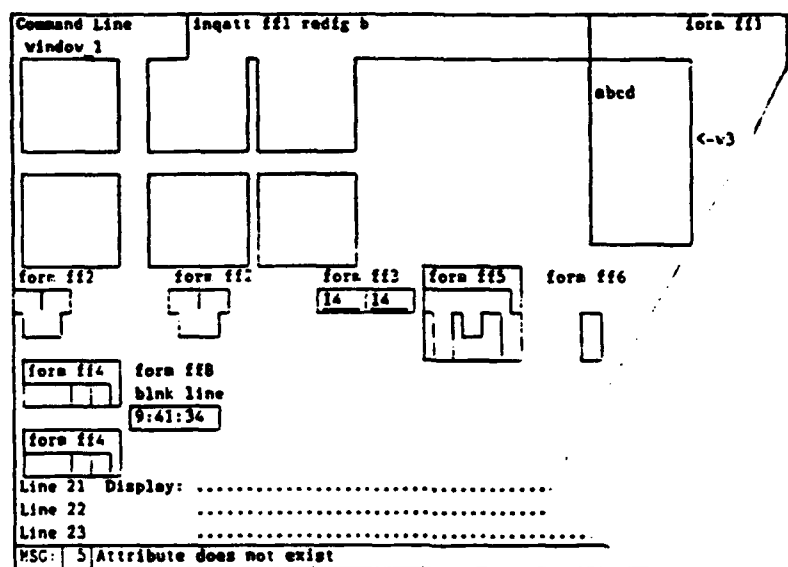


Figure 5-142d Verify Case 2 Result

The INQATT routine is used to verify that the attribute definition for REDFG has been deleted. This time the background color belonging to the attribute REDFG is requested. The message "Attribute does not exist" is issued proving the attribute definition has been deleted.

Command Line		rplfrm w3 1 ff3		form ff1	
window 1				form ff3 14 14 <-v3	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff3	
form ff4 blank line 9:41:35		form ff5		form ff6	
Line 21 Display:		Line 22		Line 23	
MSG: 5 Attribute does not exist				application	

Figure 5-143 RMVDIM Test Preparation

Add the form ff3 to window w3.

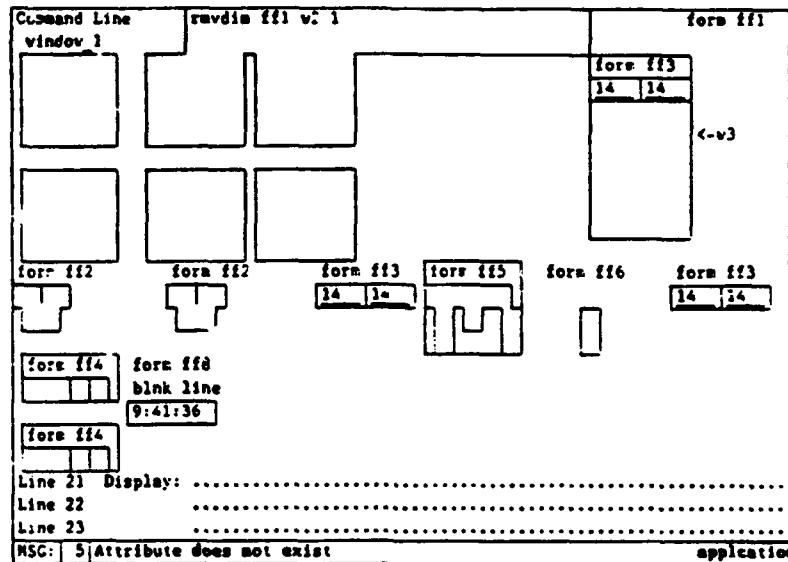


Figure 5-144a RMVDIM Test Case

The first repeat specification for the window field w2 on the form ff1 is removed.

[illegible]

Figure 5-144b Test Result

Only the second repeat specification, horizontal repetition, remains for the field w2.

Command Line		ravidoc ff2 i2		form ff1	
window 1				form ff3 14 14 <-v3	
form ff2		form ff2		form ff3	
form ff4		form ff8		form ff5	
form ff4		blank line		form ff6	
form ff4		9:41:37		form ff7	
Line 21 Display:					
Line 22					
Line 23					
MSG: 5/Attribute does not exist				application	

Figure 5-145a RMVDOM Test Case

Remove the domain clause defined for the item field i2 on the form ff2. The INQDOM test in Figure 5-132, show that the domain options for this field are defined as NUMERIC, MINIMUM 1, MAXIMUM 6.

Command Line		inquire ff2 ff3		form ff1	
window 1				form ff3	
				14 14	
				<-v3	
form ff2		form ff2		form ff3	
14 14		14 14		14 14	
form ff4		form ff4		form ff5	
14 14		14 14		14 14	
form ff4		form ff4		form ff6	
14 14		14 14		14 14	
form ff4		form ff4		form ff7	
14 14		14 14		14 14	
Line 21 Display:		Line 22		Line 23	
MSG: 7 Domain value not found				application	

Figure 5-145b Verify Test Result

Inquire what the domain clause defined for the item field i1 on the form ff2 is after having deleted it. The message "Value Clause Not Found" is issued verifying that the DOMAIN clause has indeed been dropped.

Command Line window 1

form ff1

form ff3

14 14

<-v3

form ff2

form ff7

form ff3

14 14

form ff5

form ff6

form ff8

14 14

form ff4

form ff8

blank line

9:42:25

form ff4

Line 21 Display:

Line 22

Line 23

MSG: 9 This is a help string application

Figure 5-146 RMVHLP Test Preparation

Position the cursor in the item field i1 on the form ff4 and press the <HELP> key to obtain the help associated with the field. The "help" is a text string "This is a help string". Press the <ENTER> key to continue.

Command Line		rmvhlp ff4 i1		form ff1	
window 1				form ff3	
				14 14	
				(-v)	
form ff2		form ff2		form ff3	
1		1		14 14	
form ff4		form ff8		form ff6	
14 14		blank line		14 14	
form ff4		9:42:26			
Line 21 Display:					
Line 22					
Line 23					
MSG: 0				application	

Figure 5-147a RMVHLP Test Case

Remove the help information defined for the item field i1 on the form ff4.

Command Line window 1

inqhlp ff4 i1

form ff1

form ff3

14 14

<-v3

form ff2

form ff2

form ff3

14 14

form ff5

form ff6

form ff3

14 14

form ff4

form ff8

blnk line

9:42:30

form ff4

Line 21 Display:

Line 22

Line 23

MSG: 1 No help available

application

Figure 5-147b Verify Test Result

Inquire what help is defined for the item field i1 on ff4 using INQHLP. The message "No help available" verifies that the help has been deleted.

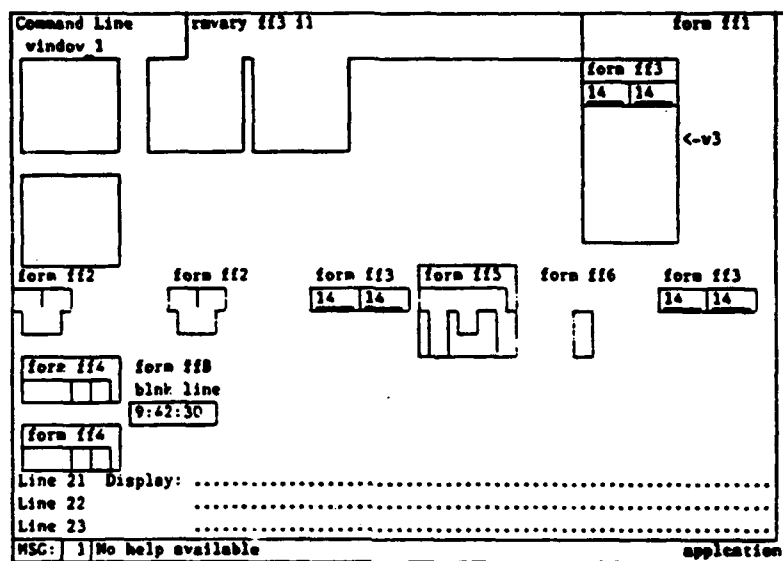


Figure 5-148a RMVARY Test Case

Remove the entire repeat specification for the item field i1 on the form ff3.

Command Line window 1

inval ff1 10 20

form ff1

form ff3

14

<-v3

form ff2

form ff3

14

form ff5

form ff6

form ff3

14

form ff4

form ff8

9:42:31

form ff4

Line 21 Display:

Line 22

Line 23

MSG: 1 No help available

application

Figure 5-148b Test Case Result

Only one occurrence of the item field i1 is now displayed on the form ff3.

Command Line inval ff1 i0 20 form ff1

window 1

form ff1

form ff2

form ff2

form ff3

form ff5

form ff6

form ff7

form ff4

form ff8

blank line

9:42:32

form ff4

Line 21 Display: "form ff1"

Line 22

Line 23

MSG: 1 No help available application

Figure 5-149 RMVVAL Test Preparation

Use INQVAL to first obtain the VALUE clause defined for the item field i0 on the form ff1. It is defined as the string "form ff1".

Command Line window 1

rmvval ff1 i0

form ff1

form ff3

14

<-v3

form ff2

form ff2

form ff3

14

form ff5

form ff6

form ff3

14

form ff4

form ff8

blink line

9:42:33

form ff4

Line 21 Display:

Line 22

Line 23

MSG: 1 No help available

application

Figure 5-150a RMVVAL Test Case

Remove the VALUE clause defined for the item field i0 on the form ff1.

Command Line pdata ff1.i0 form ff1

window_1

form ff1

form ff2

form ff2

form ff3

form ff5

form ff6

form ff3

form ff4

form ff8

blank line

9:42:34

form ff4

Line 21 Display:

Line 22

Line 23

MSG: 1 No help available application

Figure 5-150b Verify Test Case

The value of the item field still displays as "form ff1" because no new data have been assigned to it. Use PDATA to assign blanks to i0.

Command Line
window 1

pdata ff1.i0

form ff3
14

<-v3

form ff2

form ff2

form ff3
14

form ff5

form ff6

form ff3
14

form ff4

form ff8
blink line

9:42:34

form ff4

Line 21 Display:
Line 22
Line 23
HSC: 1 No help available application

Figure 5-150c Test Case Result

The "form ff1" value in field i0 is now gone.

Command Line		inqval fff 10 20	
window 1			
		form fff 14	
		<-v3	
form fff2	form fff2	form fff3	form fff5
		14	
form fff4	form fff8		form fff6
	blnk line		14
	9:42:34		
form fff4			
Line 21 Display:			
Line 22			
Line 23			
MSG: 1 No help available		application	

Figure 5-150d Another RMVVAL Verification

Use INQVAL to verify that the VALUE clause has been removed.
This is shown by the error message "Value Clause Not Found".

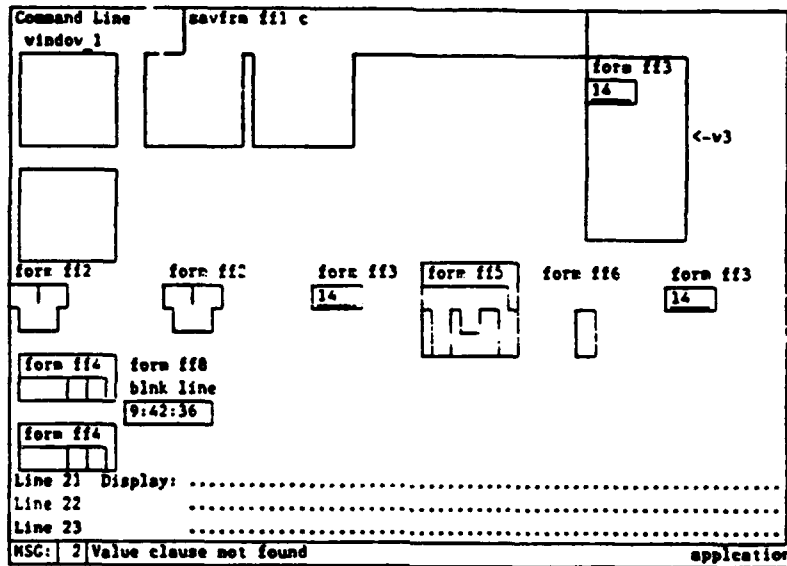


Figure 5-151a SAVFRM Test Case 1

The definition of the form ff1 is to be compiled and written out in compiled (FD) form.

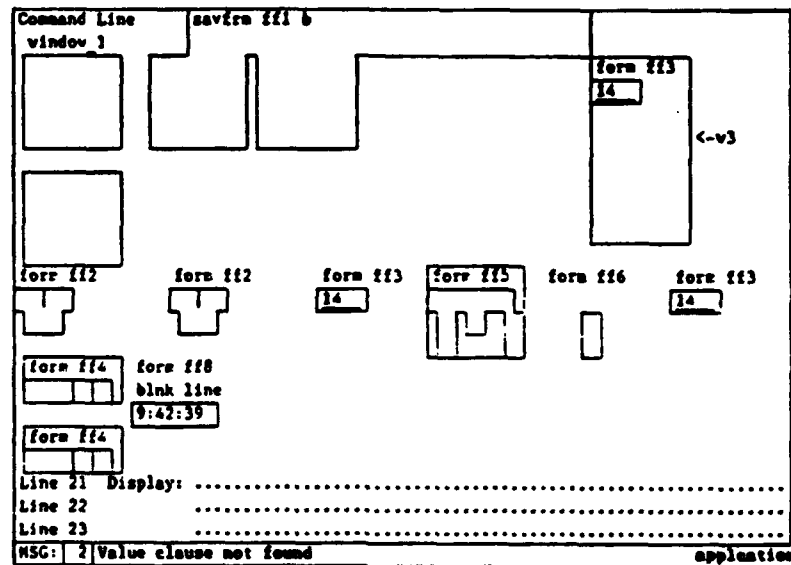


Figure 5-151b SAVFRM Test Case 2

The definition of the form ffl is to be compiled and written out in both compiled (FD) form and in source (FDL) form.

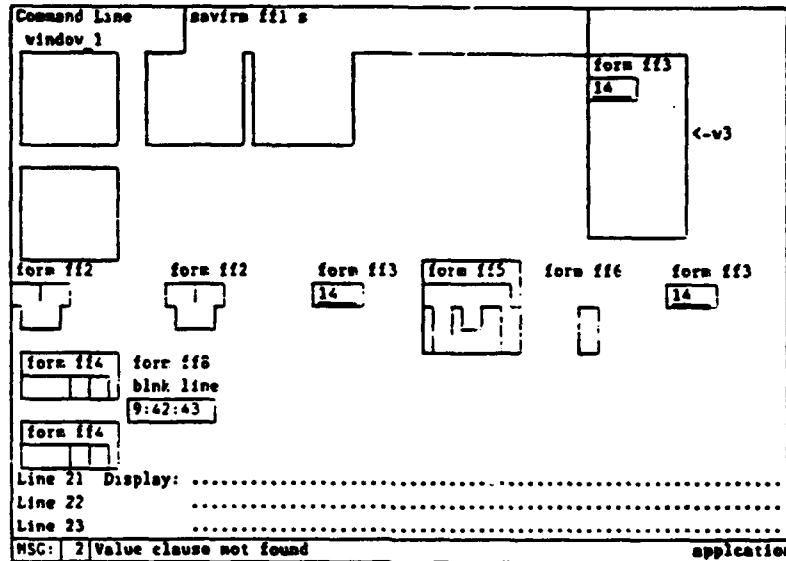


Figure 5-151c SAVFRM Test Case 3

The definition of the form ffl is to be written out in source (FDL) form.

The screenshot shows a window titled 'window_1' with a command line at the top containing 'rplfrm w3 1 ff14'. Below the command line, there are several form fields labeled 'form ff1' through 'form ff8'. 'form ff1' is a large rectangular box. 'form ff2' and 'form ff3' are small boxes containing the value '14'. 'form ff4' is a box containing '13:46:38'. 'form ff5' is a box containing a complex pattern. 'form ff6' is a small box. 'form ff7' is a box containing '14'. 'form ff8' is a box containing '13:46:38'. To the right of these fields is a vertical box labeled '<-v3'. At the bottom of the window, there is a section labeled 'Line 21 Display:' followed by three lines of text: 'Line 21 Display:', 'Line 22', and 'Line 23'. Below this section, there is a label 'MSG: 0' and the word 'application' in the bottom right corner.

Figure 5-152 APRFLD Test Preparation

Use RPLFRM to display form ff14 in window w3. This form contains three item fields. I2 is an output field whose value is defined to be i1 and i3 is displayed depending on the value of its APPEARS IF clause.

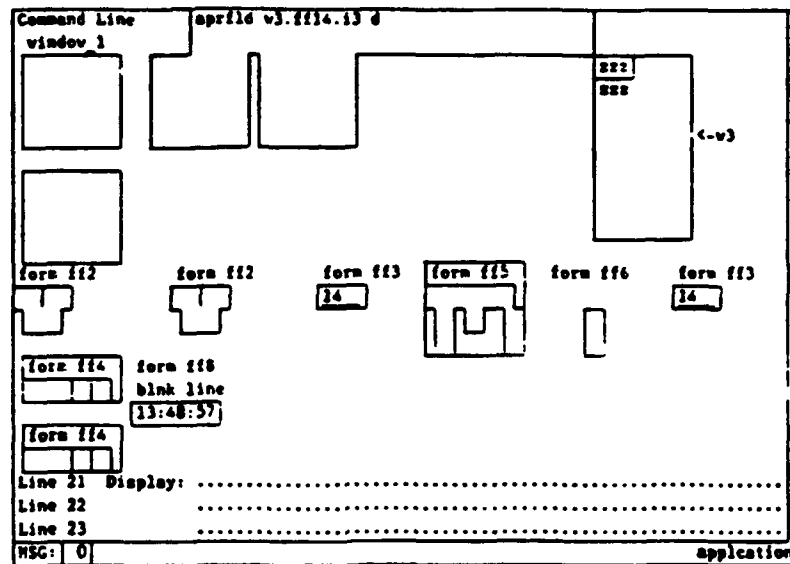


Figure 5-153a APRFLD Test Case 1 with Result

Set the display flag to nondisplay. Item i3 does not appear on the screen.

The screenshot shows a Windows 3.11 desktop environment. At the top, a taskbar displays the date and time as 'apr 16 v3.11 14.13 a'. The desktop contains several windows:

- A 'Command Line window' in the top-left corner.
- A large window on the right side with a title bar containing 'xxx' and 'xxx', and a large empty area below it.
- A window titled 'form ff1' with a small icon.
- A window titled 'form ff2' with a small icon.
- A window titled 'form ff3' with a small icon and the number '14' in the bottom-right corner.
- A window titled 'form ff5' with a small icon and a complex icon in the bottom-right corner.
- A window titled 'form ff6' with a small icon.
- A window titled 'form ff3' with a small icon and the number '14' in the bottom-right corner.
- A window titled 'form ff1' with a small icon and the text 'blink line' and '13:49:11' in the bottom-right corner.

At the bottom of the screen, there is a status bar with the text 'Line 21 Display:', 'Line 22', 'Line 23', 'MSG: 0', and 'application'.

Figure 5-153b APRFLD Test Case 2 with Result

Set the display flag to display. Item i3 appears on the screen.

The screenshot displays a graphical user interface for the APRFLD Test Case 3. At the top, a 'Command Line' window shows the command 'aprfl d v3.1116.13 t'. Below this, a 'window 1' contains several rectangular boxes. On the right side, a vertical box is labeled 'v3'. In the center, there are six forms labeled 'form ff2', 'form ff2', 'form ff3', 'form ff5', 'form ff6', and 'form ff3'. Below these, there are more forms labeled 'form ff4', 'form ff8', 'form ff4', and 'form ff4'. A 'blank line' is also indicated. At the bottom, a status bar shows 'Line 21 Display:', 'Line 22', 'Line 23', and 'MSG: 0'. The word 'application' is visible in the bottom right corner.

Figure 5-153c APRFLD Test Case 3 with Result

Toggle the display flag. Item i3 does not appear on the screen.

Command Line window 1 aprfld w3.ff14.i3 t

form ff2 form ff2 form ff3 form ff5 form ff6 form ff3

form ff4 form ff8
blank line
13:49:37

form ff4

Line 21 Display:
Line 22
Line 23

NSC: 0 application

Figure 5-153d APRFLD Test Case 4 with Result
Toggle the display flag. Item i3 appears on the screen.

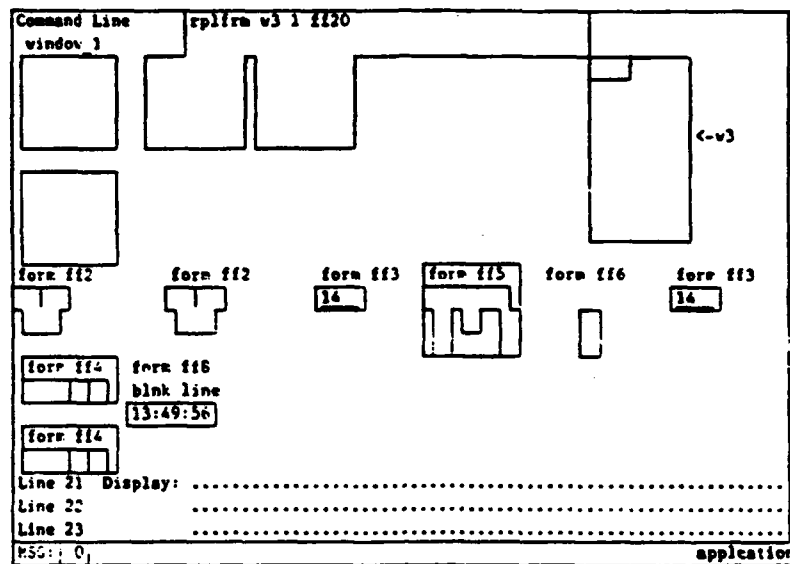


Figure 5-154 INQAPR Test Preparation

Use RPLFRM to display the form ff20 in window w3. Item i3 does not appear.

The screenshot shows a terminal window with a graphical user interface. At the top left, the text "Command Line" and "vindow 1" is visible. The main area contains several windows: "form ff2", "form ff3", "form ff5", "form ff6", "form ff4", and "form ff5". The "form ff3" and "form ff5" windows contain the number "14". The "form ff4" window contains the text "blnk line" and a timestamp "13:49:56". The bottom of the terminal shows a command prompt "Line 21 Display: (('f1;'>30) ? (1) : (0))" and subsequent lines "Line 22" and "Line 23". The bottom status bar displays "WSG: 0:" and "application".

Figure 5-155 INQAPR Test Case 1 with Result

Find out what the current appears if criterion defined for item i3 is. It appears if the value of i1 is greater than 10.

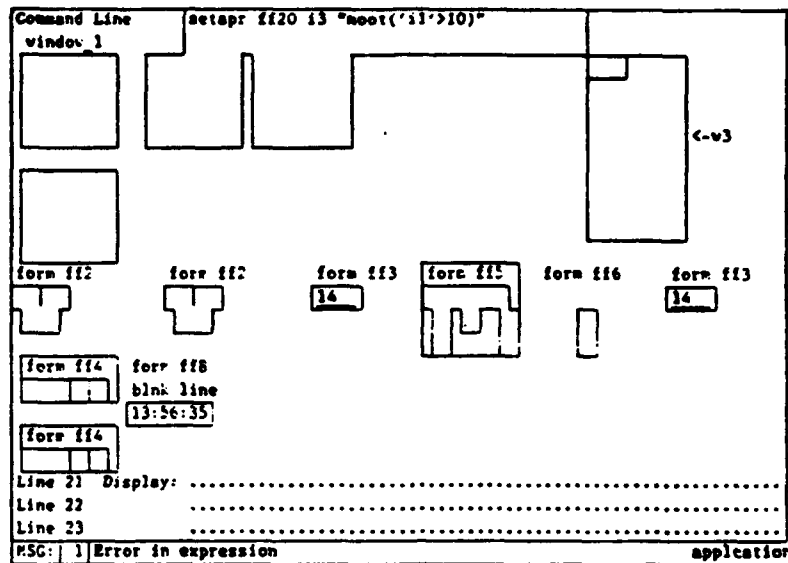


Figure 5-156 SETAPR Error Test

Enter an invalid expression for the appears if criterion. The message "Error in expression" is displayed.

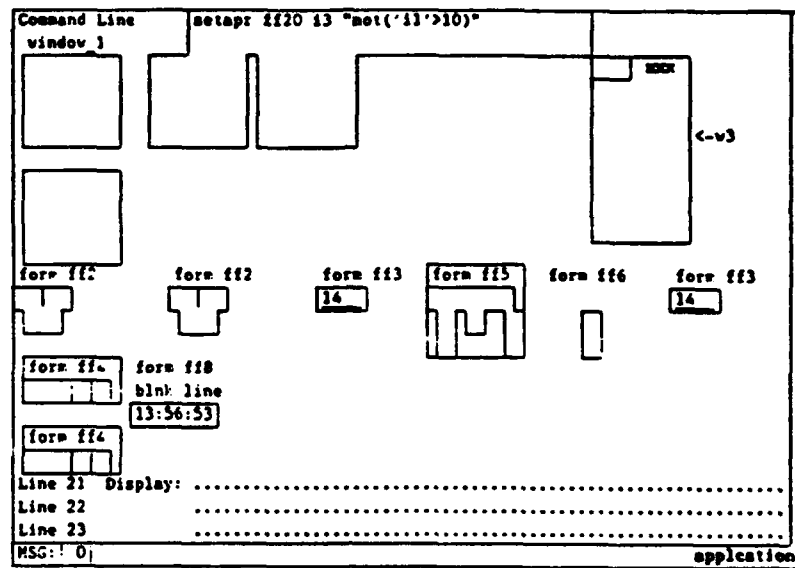


Figure 5-157 SETAPR Test Case with Result

Define the appears if criterion for item i3 to be not i1 greater than 10. Since the value of i1 is blank, i3 appears.

The screenshot displays a graphical user interface for the INQAPR test case 2. At the top, a 'Command Line' window shows the command 'inqapr ff20 i3 5'. Below this, there are several form fields labeled 'form ff1' through 'form ff15'. Some fields contain text, such as '14' in 'form ff3' and '14' in 'form ff13'. A message box at the bottom left indicates 'MSG: 1 Field value too long - truncated'. The bottom right corner shows the word 'application'. The interface also includes a 'window 1' label and a '<-v3' button.

Figure 5-158 INQAPR Test Case 2 with Result

Use INQAPR to verify the appears if criterion defined for i3. The message "Field value too long - truncated" is displayed because a buffer size of 5 is not long for the expression.

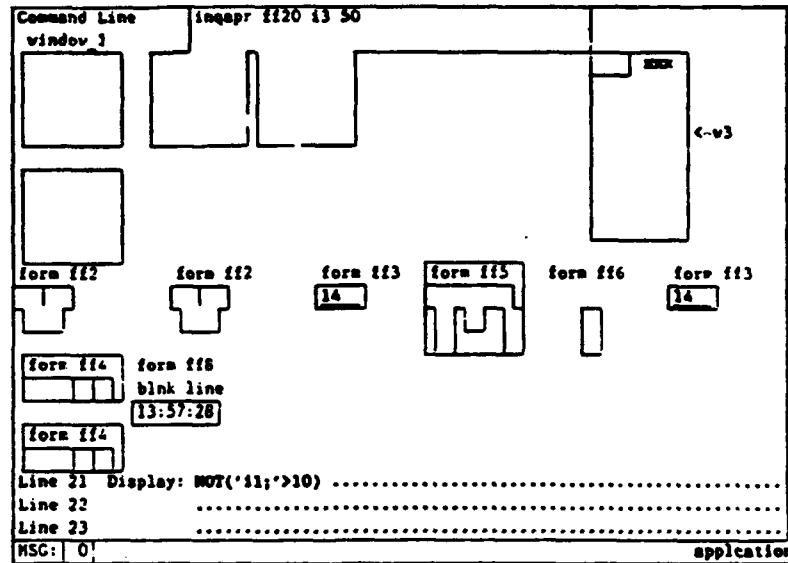


Figure 5-159 INQAPR Test Case 3 with Result

Use INQAPR again with a larger buffer size. The criterion defined previously using SETAPR is returned.

Command Line window_1

rmvapr ff20 ff

form ff2

form ff12

form ff13

form ff15

form ff16

form ff18

form ff14

form ff14

blank line

13:57:49

Line 21 Display:

Line 22

Line 23

MSG: 1 Value clause not found

application

Figure 5-160 RMVAPR Test Case 1 with Result

Use RMVAPR to delete the appears if criterion defined for an item field. In this case, 11 does not have any criterion defined. The message "Value clause not found" is displayed.

Command Line window 1

pdata v3.f120.i1 = 20

form f11

form f12

form f13 14

form f15

form f16

form f17 14

c-v3

20

20

form f14

form f18 blink line 13:58:08

form f14

Line 21 Display:
Line 22
Line 23
MSG: 0 application

Figure 5-161 RMVAPR Test Preparation

Use PDATA to enter the value "20 " in i1 so that i3 disappears.

The screenshot shows a terminal window with a complex graphical user interface. At the top, there is a 'Command Line' window and a 'rmvapr ff20 i3' window. Below these, there are several other windows and forms. On the right side, there is a window with the text '20' and '20' and a label '<-v3'. In the center, there are several windows labeled 'form ff2', 'form ff3', 'form ff5', 'form ff6', and 'form ff13'. Below these, there are windows labeled 'form ff4' and 'form ff6'. At the bottom, there is a window labeled 'Line 21 Display:' and a window labeled 'MSG: 0'. The bottom right corner of the terminal window has the text 'application'.

Figure 5-162 RMVAPR Test Case 2 with Result

Remove the appears if criterion defined for the item i3. The field appears.

Command Line		inqapr ff20 i3 50	
window 1			
			20 min 20
			<-v3
form ff2	form ff2	form ff3 14	form ff5
			form ff6
			form ff3 14
form ff4	form ff8		
	blnk line		
	13:58:43		
form ff4			
Line 21	Display:	.....
Line 22		.....
Line 23		.....
MSG:	1	Value clause not found	
			application

Figure 5-163 RMVAPR Test Verification

Use INQAPR to verify that the appears if criterion for i3 was removed. The message "Value clause not found" is displayed. Press <QUIT> to return to the IISS Function Screen and then press <QUIT> again to complete this Unit Test.

APPENDIX A

FP TEST FORMS

/* these forms are for testing form processor */

CREATE FORM ARTESTP

prompt center at 1 40 "ARTEST Parameters"

item parm1

at 3 10

size 10

display as input

prompt at left "parm1"

item parm2

at 5 10

size 10

display as input

prompt at left "parm2"

item parm3

at 7 10

size 10

display as input

prompt at left "parm3"

item parm4

at 9 10

size 10

display as input

prompt at left "parm4"

CREATE FORM ff1

ATTRIBUTE blackfg (background white, display black)

ATTRIBUTE redfg (background white, display red)

ATTRIBUTE greenfg (background black, display green)

ATTRIBUTE yellowfg (background black, display yellow)

ATTRIBUTE bluefg (background white, display blue)

ATTRIBUTE magenta (background white, display magenta)

ATTRIBUTE cyanfg (background black, display cyan)

ATTRIBUTE whitefg (background black, display white)

BACKGROUND blue

PROMPT AT 1 2 "Command Line"

PROMPT AT 21 2 "Line 21"

PROMPT AT 22 2 "Line 22"

PROMPT AT 23 2 "Line 23"
PROMPT AT 24 2 "Line 24"
PROMPT AT 25 2 "Line 25"
PROMPT AT 26 2 "Line 26"
PROMPT AT 27 2 "Line 27"
PROMPT AT 28 2 "Line 28"
PROMPT AT 29 2 "Line 29"
PROMPT AT 30 2 "Line 30"
PROMPT AT 31 2 "Line 31"
PROMPT AT 32 2 "Line 32"
PROMPT AT 33 2 "Line 33"
PROMPT AT 34 2 "Line 34"
PROMPT AT 35 2 "Line 35"
PROMPT AT 36 2 "Line 36"
PROMPT AT 37 2 "Line 37"
PROMPT AT 38 2 "Line 38"
PROMPT AT 39 2 "Line 39"
PROMPT AT 40 2 "Line 40"
PROMPT AT 41 2 "Line 41"
PROMPT AT 42 2 "Line 42"
PROMPT AT 43 2 "Line 43"
PROMPT AT 44 2 "Line 44"
PROMPT AT 45 2 "Line 45"
PROMPT AT 46 2 "Line 46"
PROMPT AT 47 2 "Line 47"
PROMPT AT 48 2 "Line 48"
PROMPT AT 49 2 "Line 49"
PROMPT AT 50 2 "Line 50"
PROMPT AT 51 2 "Line 51"
PROMPT AT 52 2 "Line 52"
PROMPT AT 53 2 "Line 53"
PROMPT AT 54 2 "Line 54"
PROMPT AT 55 2 "Line 55"
PROMPT AT 56 2 "Line 56"
PROMPT AT 57 2 "Line 57"
PROMPT AT 58 2 "Line 58"
PROMPT AT 59 2 "Line 59"
PROMPT AT 60 2 "Line 60"
PROMPT AT 61 2 "Line 61"
PROMPT AT 62 2 "Line 62"
PROMPT AT 63 2 "Line 63"
PROMPT AT 64 2 "Line 64"
PROMPT AT 65 2 "Line 65"
PROMPT AT 66 2 "Line 66"
PROMPT AT 67 2 "Line 67"
PROMPT AT 68 2 "Line 68"
PROMPT AT 69 2 "Line 69"

item i0
at 1 70
size 8
display as text
value "form ff1"

item i3
at 21 11
size 8
display as text
value "Display:"

item i4
at 1 20
size 40 by 2
display as input
help pathcom

WINDOW w1 (2 v 1)
AT 3 2
SIZE 10 BY 4
background white
appears if 'ff1.ff6.i1' < "11111"

WINDOW w2(2 v 1, 2 H 1)
AT 3 15
SIZE 10 BY 4
background xparnt

WINDOW wnf
at 3 45
size * by *
background green

WINDOW w3
at 3 60
size 10 by 8
background yellow

form ff2 (2 h 4)
at 12 1
size 12 by 4

form ff3
at 12 32
size 10 by 4

form ff4 (2 v 1)
at 16 2
size 10 by 2

form ff5
at 12 43
size 10 by 4

form ff6
at 12 55
size 10 by 4

form ff7
at 12 68
size 10 by 4

form ff8
at 16 13
size 10 by 4

item fqn
at 21 20
size 60 by 3
display as output

CREATE FORM ff2
prompt at 1 2 "form ff2"

item i1(2 h 1)
at 2 2
size 2
display as input

item i2
at 3 2
size 3
domain (NUMERIC MAXIMUM 6 MINIMUM 1)
display as input

create form ff3
prompt at 1 2 "form ff3"

item i1(2 v 1, 2 h 1)
at 2 2
size 3
display as input

```
create form ff4  
background black  
prompt at 1 2 "form ff4"
```

```
item i1  
at 2 2  
size 4  
display as input  
help "This is a help string"
```

```
create form ff5  
background white  
prompt at 1 2 "form ff5"
```

```
item i1  
at 3 3  
size 1 by 2  
display as input  
help application
```

```
create form ff6  
background xparnt  
prompt at 1 2 "form ff6"
```

```
item i1  
at 3 6  
size 1 by 4  
display as input
```

```
create form ff7  
prompt at 1 2 "form ff7"
```

```
item i1(3/6 v 0, 2/4 h 1)  
at 2 2  
size 1  
display as input
```

```
create form ff8  
prompt at 1 2 "form ff8"
```

```
item i1  
at 3 2  
size 8  
display as input
```

```
create form ff9
```

prompt at 1 2 "form ff9"

item i1
at 2 2
size 8
display as input

window w4
at 3 1
size 10 by 5
display as black

create form ff10
size 10 by 8
prompt at 1 2 "Form ff10"

item i1 (* v)
at 2 2
size 4
display as input

create form ff11
size 10 by 8
prompt at 1 2 "Form ff11"

item i1 (4/ * v)
at 2 2
size 4
display as input

create form pathcom

item i4
at 3 47
size 1
display as input
help morhelp

prompt at 1 30 "Commands for ARTEST"
prompt at 3 30 " More Commands:"
prompt at 5 10
"-----"

prompt at 6 9 "add form to a window form"	addfrm window
prompt at 7 9 "delete pages from window page"	rmvpag window

```
prompt at 8 9 "replace page in window          rplfrm window page
form"
prompt at 9 9 "close form                      clsfrm form"

prompt at 10 9 "put data to form item array    pdata path data"
prompt at 11 9 "get data from form item array  gdata
inst(0=prev,1=cur) path"

prompt at 12 9 "change attributes: background  putbak path
dur(prm=0,tmp=1) attrib"
prompt at 13 9 "get attributes: background     getbak path
dur(prm=0,tmp=1)"
prompt at 14 9 "put and get temp attributes(b) tmpbak path dur
attrib"

prompt at 15 9 "get name of form on page n      gpage window
page"
prompt at 16 9 "get number of pages in window  gwindo window"

prompt at 17 9 "put cursor to field            putcur path"
prompt at 18 9 "window set(term within term)   oiscr path"

prompt at 19 9 "change attributes: foreground  putatt path
dur(prm=0,tmp=1) attrib"
prompt at 20 9 "get attributes: foreground     getatt path
dur(prm=0,tmp=1)"
prompt at 21 9 "put and get temp attributes(f) tmpatt path dur
attrib"
```

create form morhelp

```
item i4
at 3 47
size 1
display as input
help arthlp2
prompt at left "More More Commands"
prompt at 2 28 "More Commands for ARTEST"
prompt at 4 10
"-----"

prompt at 5 9 "open logical device              opnldv returns
ldvid"
prompt at 6 9 "close logical device            clsldv
ldvid(except 'HOME')"
```

prompt at 7 9 "set logical device col with depth"	setldv ldvid row
prompt at 8 9 "change logical device ldvid(default is 'HOME')"	chgldv
prompt at 9 9 "inquire logical device ldvid"	ingldv returns

prompt at 10 9 "put data to Virtual Terminal	putvti data"
prompt at 11 9 "get data from Virtual Terminal	getvti "
prompt at 12 9 "parse fully qualified name lev(0=1st,1=fst,-1=nxt21st,etc)"	parfqn
prompt at 13 50 "use pf16(0) first"	
prompt at 14 9 "get default qualified name	getdqn"
prompt at 15 9 "set default qualified name	setdqn path"
prompt at 16 9 "put message line string	pmsgls string"
prompt at 17 9 "put message line code	pmsglc code"
prompt at 18 9 "output a screen	outscr path"
prompt at 19 9 "put cursor at a location column"	putloc path row
prompt at 20 9 "get the length of a buffer	gdatln path"

create form arthlp2

prompt at 2 28 "More Commands for ARTEST"

prompt at 3 10

"-----"

prompt at 5 9 "add an element to an array	addelm path"
-------------------------------------------	--------------

prompt at 6 9 "open a form	opnfrm form"
----------------------------	--------------

prompt at 8 10

"-----"

prompt at 9 23 "Special Function Key Definitions"

prompt at 10 10

"-----"

prompt at 11 20 "use pf16(0) to display path name of cursor
position"

prompt at 12 20 "use pf15(3) to send screen to printer (to call
'prntvt')"

prompt at 13 20 "use pf17(.) to refresh the screen (to call
'rfshvt')"

create form ff12

item i1

display as input

at 1 2

size 8 by 5

create form ff13

item i1

display as input
at 1 2
size 6 by 34

create form ff14
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
value "xxx"
size 3

create form ff15
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if 2 > 1
value "xxx"
size 3

create form ff16
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if 2 < 1
value "xxx"
size 3

create form ff17
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if 'i1' != 1
value "xxx"
size 3

create form ff18
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1

appears if between('i1', 1, 10)
value "xxx"
size 3

create form ff19
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if in('i1', 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10)
value "xxx"
size 3

create form ff20
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if 'i1' > 10 ? 1 : 0
value "xxx"
size 3

create form ff21
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if 'i1' > "CCC" ? 1 : 0
value "xxx"
size 3

create form ff22
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if NOT 'i1'
value "xxx"
size 3

create form ff23
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output

at 3 right of i1
appears if IN(BETWEEN('i1', 1, 10), 1, 2, 3, 4)
value "xxx"
size 3

create form ff24
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if IN(BETWEEN('i1', "AAA", "CCC"), 1, 2, 3, 4)
value "xxx"
size 3

create form ff25
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if IN(BETWEEN('i1', "AAA", "CCC"), "AAA", "BBB", "CCC",
"DDD")
value "xxx"
size 3

create form ff26
item i1
display as input

at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if NOT APPEARS('i1')
value "xxx"
size 3

create form ff27
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if APPEARS('i1')
value "xxx"
size 3

create form ff28
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if APPEARS('ff24.i1')
value "xxx"
size 3

create form ff29
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if 'i1' >= 1 ? 'i1' = 5 ? 1 : 0 : 1
value "xxx"
size 3

create form ff30
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if NOT IN('i1' >= 1 ? 'i1' = 5 ? 1 : 0 : 1, 1, 2, 3)
value "xxx"
size 3

create form ff31
item i1

display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if 'i1' <= 0 OR 'i1' >= 10
value "xxx"
size 3

create form ff32
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if 'i1' != 11 AND 'i1' >= 10
value "xxx"
size 3

create form ff33
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if GWINDO('w3') > 1
value "xxx"
size 3

create form ff34
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if CURSOR('i2')
value "xxx"
size 3

create form ff35
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if gpage('w3', 1) = "FF3"
value "xxx"
size 3

create form ff36

item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if getatt('i1', 0) != "INPUT"
value "xxx"
size 3

create form ff37
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if not getatt('i1', 0) != "INPUT"
value "xxx"
size 3

create form ff38
prompt at 1 4 "ff38"

item i1
display as input
at 2 2
size 3

item i2
display as output

at 2 6
value 'i1'
size 3

form f1
at 4 2
appears if 'i1' > 10 ? 1 : 0
size 7 by 6

create form f1
prompt at 1 2 "F1"

create form ff39
item i1
display as input
at 1 2
size 3

item i2
display as output
at 2 2
value 'i1'
size 3

item i3
display as output
at 3 right of i1
appears if not role("manager")
value "xxx"
size 3

APPENDIX B
VT100 KEYPAD LAYOUTS

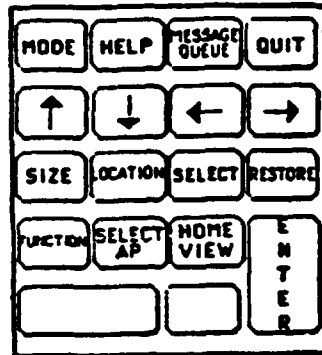


Figure B-1 Window Manager Mode

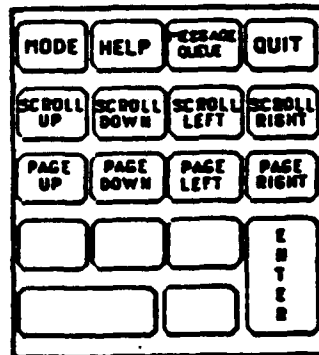


Figure B-2 Scroll/Page Mode

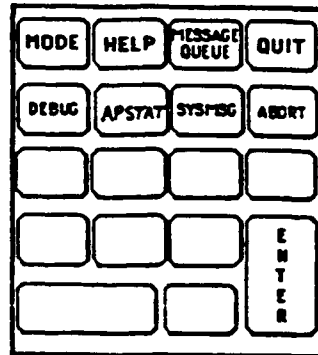


Figure B-3 Status Mode

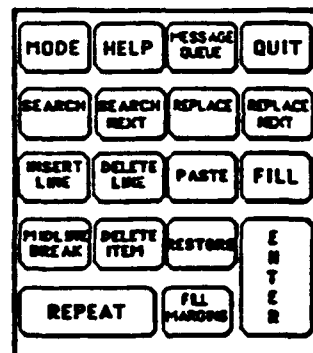


Figure B-4 Text Editor Mode